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ARCHITECTURAL PRACTICE IN THE ITALIAN RENAISSANCE

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IN THIS PAPER I have chosen to concentrate on the High, or as I prefer to call it, the Roman Renaissance of the first half of the sixteenth century only because I am more familiar with the sources of this period than of those that precede and follow. But I think that a proper study of Italian Renaissance practice ought to divide the field into at least three parts: first, the generation of Brunelleschi and Alberti which is documented by archival material, theoretical writing on architecture, and biography. Here one might trace the emergence of practice from the medieval guild system into the sphere of Humanism. Second, the period I shall discuss, which is not strong in theory, but which compensates by providing richer biographies, more letters and archival records, and above all, large collections of drawings—sources which are almost nonexistent for the first period. This is an age of rugged individualism in architectural practice. Finally, something should be said about the later sixteenth century when, along with the foundations of the first academies, architects begin to write about practice, while they tend to stabilize theory into law. Here architecture begins to take shape as a distinct profession, perhaps for the first time since antiquity.

Leaving this more ambitious scheme to future students, my present intention is to draw from the sources at hand certain generalizations concerning the apprenticeship and training of the architect, the practice of the profession, and the process of design during the period bounded by Bramante's arrival in Rome in about 1500 and Antonio da Sangallo's death in 1546. Antonio will get more attention than his distinguished contemporaries because we know more about him and also because he deserves distinction for being one of the few architects of his time who never wanted to be anything else.

Italian architects in the fifteenth and sixteenth centuries ordinarily turned to building at an advanced age. They apprenticed in the studio of a painter or sculptor and practiced one or both of these arts until the requirements of some patron turned them to architecture. There was no guild to harbor architects and no means of serving an apprenticeship in the profession. The title of Master Architect, rather than being a prerequisite of employment, was normally granted to a master craftsman in another field in consequence of his receiving his first building commission. Because in this system architecture perforce involved more taste than technique, the social position of the architect was high, and if a man was not a gentleman before practicing architecture, he became one after. Antonio Sangallo rose to eminence by another path, which appears to have been a risky and unpromising one. He apprenticed in carpentry.[1] By virtue of excellent family connections and good fortune of working under Bramante at the Vatican, he was able to overcome this stigma and to gain the title "Architect," but only at the age of 32, when he was appointed to assist Raphael at St. Peter's.[2] He was the only important Roman Renaissance architect who rose from the building trades, though a generation later Palladio did the same with the help of equally distinguished patronage.

The practical knowledge that the young Antonio gained working in the *fabbriche* of St. Peter's, the Vatican Palace, and the Castle of Ostia, combined with design training as a draughtsman for the aging Bramante, appears today to be an excellent background for the practice of architecture. But the sixteenth-century attitude is typified by Benvenuto Cellini, who wrote after Antonio's death that his inferiority to Michelangelo must be ascribed to the fact that he was neither a sculptor nor a painter.[3] The reason for this attitude is best explained by Michelangelo, who once wrote, "there is no question but that architectural members reflect the members of Man, and whoever has not been or is not a good master of the (human) figure and likewise of anatomy cannot understand (anything of them) . . . ."[4]

Those sixteenth-century sculptors and painters who undertook the designing of buildings cannot have brought to their first attempts much more than a trained eye and an admiration for antiquity. Even Michelangelo complained that he was forced to build though he was not an architect.[5] Generally the solution of structural problems had to be left to masons and carpenters who had been accustomed for centuries to inventing means to achieve a

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given end. Bramante, in spite of some 30 years in the practice of architecture, never did gain much competence in technical matters, and after his death Antonio was kept busy patching up his errors. The Vatican *loggie* had to be reinforced from below, the Belvedere corridors crashed to the ground, nearly killing a pope, and the St. Peter's crossing piers had to be fattened, much to the detriment of their handsome profile.[6] This lack of technical discipline may explain in part why the High Renaissance is one of the few great eras in architectural history in which a new style emerges without the assistance of any remarkable structural innovation.

Aside from training in one or another of the plastic arts, which provided a foundation in mathematics and perspective, the essential prerequisite for the practice of architecture was a knowledge of Roman remains. This was gained at first hand wherever possible, not only in Rome itself, but throughout Italy and Provence. Most of the major architects, and many whom we know only through their sketches after the antique, filled volumes of notebooks with measured drawings of plans and details, or with impressions in perspective.[7] They became familiar with monuments beyond their reach through the sketchbooks of their contemporaries, which had a wide currency and constituted the textbooks for architectural training.[8] In present-day collections of Renaissance architectural drawings these sketches far outnumber the studies for contemporary buildings. Fanciful reconstructions of Roman remains, which were a passion with late fifteenth-century architects such as Cronaca and Bramantino, were out of fashion after the turn of the century, when the accent turned from a romantic to a practical and archaeological approach.[9]

A knowledge of Vitruvius was equally important and for the same reasons. Vitruvius was significant, not because he was a theorist, but because his subject was Roman Architecture. If theory in itself had been valued, High Renaissance architects would have studied the writings of Alberti, Francesco di Giorgio, and perhaps Filarete, which they manifestly did not do. Nor did they trouble to theorize themselves; they left writing to their disciples, of whom Serlio is the best known, and his volumes are significantly visual compendia rather than philosophical treatises—best to be described as printed sketchbooks.

The schooling of the architect dispensed not only with the theories of the fifteenth century but with the monuments as well. It is curious that while Bramante's Roman work was measured and drawn by innumerable architects through the sixteenth century, his Milanese buildings were never examined. His predecessors virtually were relegated to the Middle Ages. I know only three Renaissance drawings after Alberti, and all are copies of one plan for S. Sebastiano in Mantua.[10] The late Brunelleschi interested one or two architects, who sketched the lantern (not the dome!) of Florence Cathedral, and the plan of Santa Maria degli Angeli, presumably because they were adequately Roman.[11] On the other hand, certain buildings constructed or projected after 1500 took their place beside ancient remains, and the younger architects devoted a portion of their sketches to Bramante, or occasionally to Peruzzi, Antonio Sangallo, and Michelangelo.

To this preparation for the practice of architecture—at best a haphazard one—was added a kind of schooling that the grandiose projects of the period made available to most of the potential architects in the urban centers. Projects such as the construction of St. Peter's and the Vatican Palace brought innumerable artists and artisans into close contact with an architectural workshop, and I can readily believe that the practical precepts of the profession were learned by Raphael, Peruzzi, and even by Michelangelo, from observing what went on in Bramante's Vatican studio, whether or not these men originally were given any architectural assignments there.

So much for training. Once launched as an architect, the early sixteenth-century aspirant established himself by doing well on an initial commission, and his practice grew much in the same fashion as that of the modern architect. Sangallo's earliest commissions are typical. Santa Maria di Loreto he probably inherited from one of the architects of Julius II.[12] The church of the Hospital of San Giacomo, as we shall see shortly, was designed for a competition, one in which Antonio had the advantage of being a tenant and neighbor of the institution.[13] The monks of Santa Maria della Quercia in Viterbo employed him because they said they wanted a ceiling as elegant as the one he had built for the pope in the Vatican consistory.[14] The Farnese Palace is only the first of innumerable commissions for Cardinal Allessandro Farnese (later Pope Paul III) and his sons, euphemistically called nephews. The alliance of an architect with a distinguished family was a common occurrence: Bramante supplanted Giuliano Sangallo as the architect of Julius II, Raphael was the favorite of the Medici popes, Peruzzi worked for his Sienese compatriots, the Chigi, and so forth. But the arrangement entailed no obligation on either part; clients changed architects and *vice versa*. Clients, in fact, often resorted to competitions in selecting architects for important commissions. One of the best known examples of this is the competition for the design of S. Giovanni dei Fiorentini, to which Leo X called Sangallo, Jacopo Sansovino, Raphael, and Peruzzi.[15] Sansovino got the job, but was replaced by Sangallo (it is hard to tell whether an injury or incompetence precipitated this) and after the church was nearly finished, Michelangelo was called in to design a new one. Other competitions were held for completing earlier churches such as San Lorenzo in Florence, San Petronio in Bologna, and Milan Cathedral. Sangallo and Peruzzi competed on other occasions; for the S. Giacomo degli Incurabili commission and I believe also for Santo Spirito in Sassia.[16]

Several of their designs for the former are preserved, and a comparison of two of them (Figs. 1, 2) shows that both men were working for the same general type of solution: placing the wards along the longer sides of the plot, courts on the interior, and providing churches with access to the street. The absorption with centrally planned churches is symptomatic of the period.

The greatest setback of Sangallo's career was the competition for the cornice of the Farnese Palace. In the last year of his life, as he was completing the chief masterpiece of his long service for Paul III, Antonio was forced to submit to a reconsideration of his cornice design and four other architects and painters were invited to submit drawings.[17] As everyone knows, Michelangelo triumphed, and Antonio was to have carried out his project, but he shortly died, as the Romantic historian would put it, from shame. I imagine that this affair may be attributed to court intrigues.

As in the preceding century, the duties of the architect reached far beyond the building of palaces and churches. Sangallo, who was fortunate in reaching the peak of his career at the same time as his patron, spent most of his later years fortifying Rome and the Papal States, building entire towns, such as Castro, in the new duchies carved out for the *nipoti*, restoring the Vatican, and designing settings for sundry celebrations. He even built a monumental well for the town of Orvieto.[18]

Financial relations between clients and architects are a mystery. Where private building accounts are preserved, the name of the architect rarely appears, and almost never as the recipient of a fee. Perhaps he was paid by grants of property or by casual sums from the pocket of the head of a family or the trustee of an institution or confraternity. Papal commissions, however, were rewarded in a more orderly manner. A monthly stipend attended each supervisory job. In 1536 Sangallo was receiving 25 scudi monthly as *capomaestro* of St. Peter's, the same for fortifying Ancona, and 10 scudi for the *Santa Casa* in Loreto; two years later another 25 was added for the fortification of Rome.[19] It was understood that any other jobs for the Holy See would be done without further remuneration. But there were exceptions to this arrangement; Michelangelo wrote in 1555 that he had been forced to work on St. Peter's for 8 years without pay.[20]

In the largest building programs an architect could devote most of his time to design and supervision because other duties were carried out by a large staff. At St. Peter's, for instance, there was a hierarchy that became more complex as the building grew.[21] In the 1520's and '30's it apparently was organized with an architect (Sangallo) at the head along with a co-architect (Peruzzi). The execution was in charge of a *curatore* (Giuliano Leno) and a *computista* (Francesco Megalotti; later Jacopo Meleghino) immediately below him, if not on a par, who served as paymaster, and for this reason was a member of a board of three who measured and priced competed work; the *mensuratori* (Giov. Francesco da Sangallo and Rainieri da Pisa). The funds allotted by the Camera were distributed by two *depositari* or treasurers (Simone Ricasoli, Leonardo Bini). This staff had its *segretario*, whose hand is found in the records alongside that of the *computista*. On the job there was a group of 5 to 10 *soprastante*, who might also be *mensuratori*, indicating that this position was higher than what we would call "foreman." It was probably comparable to a junior partner in an architectural or engineering firm. Next there were the *sotto-soprastante*, who were foremen and occasionally specialists, as: *sotto soprastante sopra i legnami* (carpenters). At the bottom of the official hierarchy came the *capomaestri* directing crews in their special crafts: carpentry, masonry, carving, ironwork, etc.

In this scheme the Renaissance architect played a role similar to his modern counterpart. But an organized *fabbrica* was exceptional. As a rule the architect assumed many of the duties described above. He was the chief estimator, determining the sum to be paid for a given construction job; he was often the paymaster, and he might be called on to supply mortar or materials for large sums that only later would be reimbursed by the client's treasurer. In doing this he assumed some of the duties that nowadays are assigned to the contractor. However there were contractors, and they served almost the same function as they have served in later times. For example, when the rebuilding of the Farnese Palace in Rome was started in 1541, the agents of Pierluigi Farnese signed a contract with the impressario Bartolomeo Baronio for its construction. It itemizes in detail the responsibilities of both parties.[22] The duke is to supply the mortar ready mixed, while the stone and brick is to come from the contractor, its quality subject to review by Sangallo and his associate Meleghino. The price of construction on walls and vaults is set by the *canna*, the measurement being assigned to two technicians: one appointed by the duke and one by Baronio. Certain prices, related to roofing and mouldings are left to the architects' judgment. The document closes: "and in the event that the said masters should make some omission that causes damages to the said structure by not working honestly as they ought to do, it shall be in the power and judgment of the said master Antonio Sangallo and Giacomo Meleghino to deprive them of the work and to give the structure to other masters."

Antonio's association with Meleghino on this job was not at all to his taste, and it illuminates a curious custom that permitted clients to create partnerships among architects who were unsympathetic to one another. Meleghino was the pope's toady and not much of an architect, which is sufficient explanation for the animosity.[23] Since Antonio's many commissions kept him away from Rome for

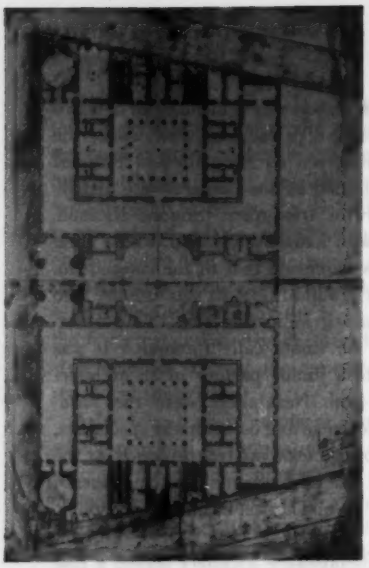

Fig. 1. Antonio de Sangallo the Younger, plan-project for the Church and Hospital of San Giacomo degli Incurabili, Rome, *c.* 1519. (Florence, Uffizi, *Arch.* 870. Photo Sopraintendenza, Florence)

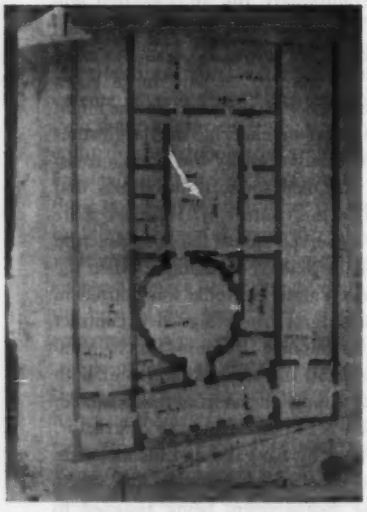

Fig. 2. Baldassare Peruzzi, plan-project for the Church and Hospital of San Giacomo degli Incurabili, Rome, *c.* 1519. (Florence, Uffizi, *Arch.* 578.)

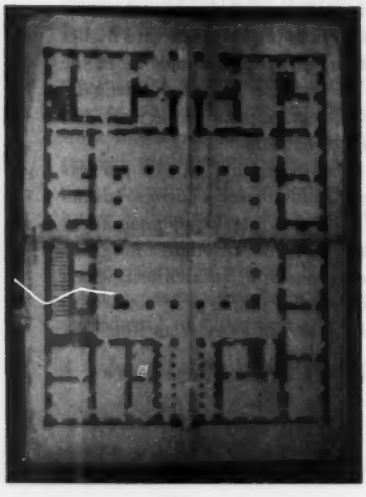

Fig. 3. Antonio da Sangallo the Younger, presentation plan of the Farnese Palace, Rome, 1541–46. (Florence, Uffizi, *Arch.* 298.

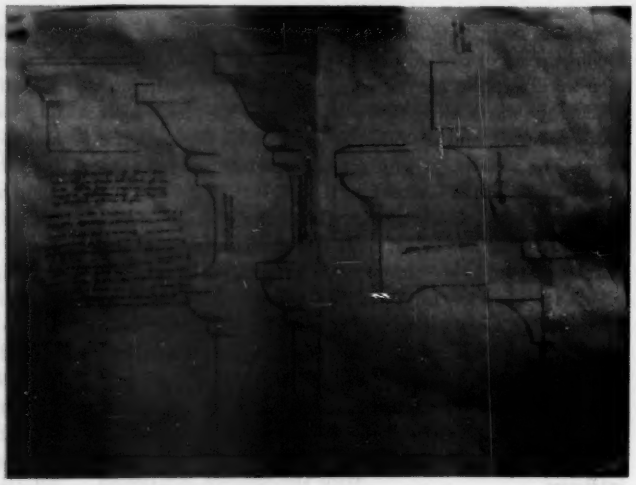

Fig. 4. Antonio da Sangallo the Younger, profiles for the Farnese Palace, Rome, 1541–46. (Florence, Uffizi, *Arch.* 1007 *verso*.)

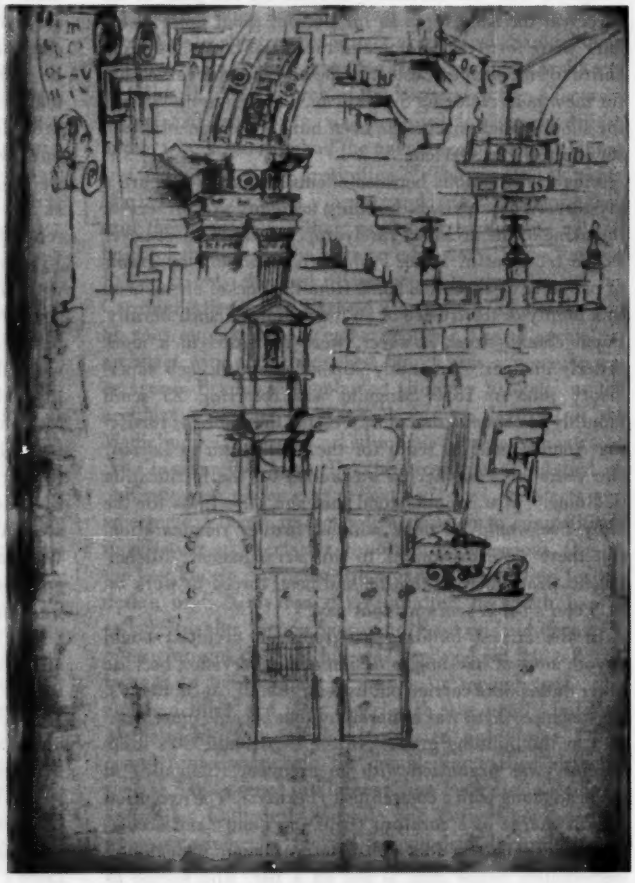

Fig. 5. Antonio da Sangallo the Elder, studies for San Biagio, Montepulciano, and other structures, *c.* 1518. (Florence, Uffizi, *Arch.* 7836. Photo Sopraintendenza, Florence)

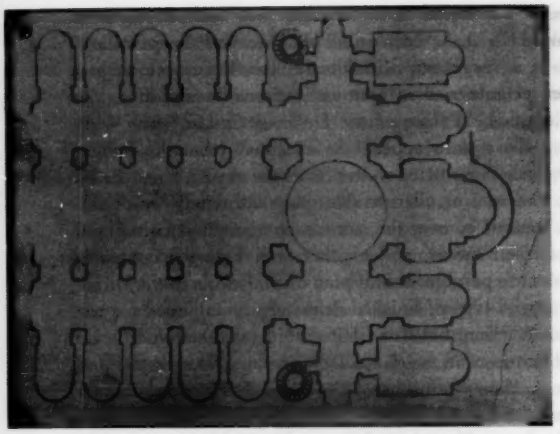

FIG. 6. Antonio da Sangallo, the Younger, plan-project for San Giovanni dei Fiorentini, Rome, *c.* 1520–25(?). (Florence, Uffizi, *Arch.* 861)

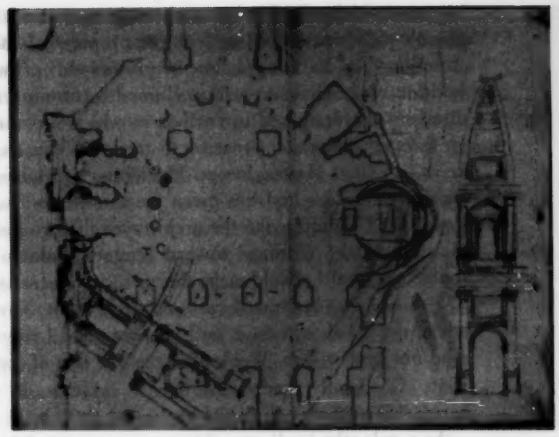

FIG. 7. Antonio da Sangallo, the Younger, plan-projects and elevation for San Giovanni dei Fiorentini, Rome, *c.* 1520–25(?). (Florence, Uffizi, *Arch.* 1292)

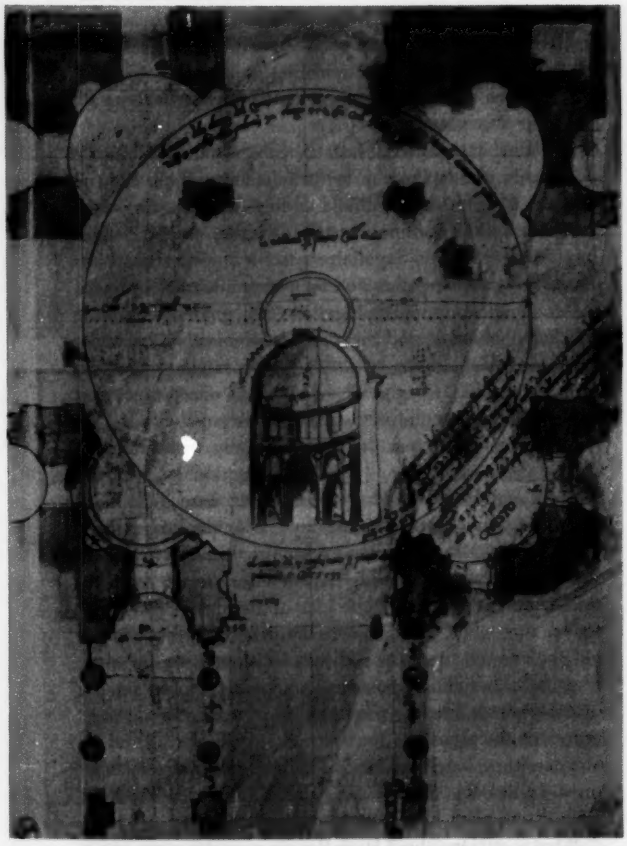

FIG. 8. Baldassare Peruzzi, plan-project for the crossing of St. Peter's, Vatican. *c.* 1530(?). (Florence, Uffizi, *Arch.* 107. Photo Sopraintenza, Florence)

FIG. 9. Michelangelo Buonarroti, study for a window. (Florence, Casa Buonarroti. Photo Alinari)

long periods, he did his best to keep in touch with Meleghino's activities as well as with the progress of the construction. An amusing letter is preserved in which a faithful workman writing from Rome to Antonio in Rieti discusses the design of two windows which are sketched on the same page and proceeds to report: "You ought to know, Sir, that Master Jacopo Menichino (*sic*) has been here at the palace and has given me a message from the Pope that I should make the architraves that go over the pilasters of the entrance toward Santo Gerolamo (i.e., south) and that I should make the cornice there separately (?) (*istachata*) because there is no stone for it. Now, Sir, advise me if I should do it, and Vincenzo and I reverently send our best wishes. Written on the 9th day of January 1546. Obediently yours. Nardo di rafaello de rossi, carver."[24]

As a rule, the leading architects were assisted by subordinates who could be relied on not to meddle in the design. Antonio had Aristotile and Giovanni Battista Sangallo, for instance, who consistently helped him to keep an eye on far-flung projects, and his notes and theirs are often found together on preparatory sketches. Along with other adherents, these men formed what Vasari disdainfully called the *Setta Sangallesca*, or "Sangallo Clique," but it is hard to see in the group what we should call an architectural firm.[25] Even in the rare cases when a lesser architect executed drawings or made surveys for a more distinguished one, the relationship seems to have been informal. In fact, closer parallels to the modern office are found among painters than among architects in the Renaissance. Painters had to have a shop that was stylistically cohesive, while architects did not, as evidenced by the building of St. Peter's, which brought together some unlikely partners: Bramante and Giuliano Sangallo, Raphael and Fra Giocondo, Antonio and Peruzzi, and Vignola and Ligorio.

The High Renaissance architect managed without a firm and usually without even an office because he did so little detailed designing. It is in the process of design that his methods are most at variance with those of later periods, a fact that is amply documented by the many surviving early sixteenth-century drawings. In examining a collection of these drawings one's first impression is that very few of them were intended to be used in constructing a building or to be seen by anyone other than the architect. They are nearly all rapidly sketched studies of tentative ideas, sometimes for specific buildings, and sometimes for ideal structures. The few that are finished may be classed in two categories: first, the large, carefully drawn and attractively rendered projects that were made for the client. These are called presentation drawings; they are rare and they cannot have been much use for construction because they almost never include measurements or a scale. Moreover, they typically show the building that was to have been built rather than the one that was built. A good example is Fig. 3, Antonio's final plan for the Farnese Palace. It is a large sheet, without the usual scribblings and measurements, and without indication of scale, though it is identified, "Palace of the Duke of Castro." The wing facing the square appears as executed (though changes were made in partition walls) while the garden front drawn here does not at all resemble what ultimately was built. Fig. 1 is, of course, the same sort, though it contains a few measurements, and another well known example is Bramante's parchment half-plan of St. Peter's in the Uffizi. The second type of finished drawing was intended for use in construction, but it is limited to details—a window, an entablature—and was intended only to guide masons and carvers. Here again one of the Farnese series is a handy example (Fig. 4), in which Antonio has drawn meticulously the profiles of window mouldings for the use of the stone-carvers. They are identified as belonging to windows in the arcade as: "Moulding for the capital of the pilaster (*stipite*) of said Farnese Windows." The tradition of verbal communication between architect and craftsman typically comes to the fore as the architect fills the left side of the sheet with instructions in longhand that might readily have been graphically presented. They deal mostly with linear measurements.

All other drawings fall into the category of preliminary sketches, and anyone who has tried to straighten out the history of a sixteenth-century building from drawings will know what a mêlée of undigested ideas they create. A sheet by the elder Antonio Sagallo presents a familiar confusion (Fig. 5). Here the arches and the campanile of San Biagio in Montepulciano appear together with unidentified door brackets, balusters, and the plan of a domestic (?) structure, one piled on top of another. His nephew does the same thing (Fig. 7), though he sticks to one project and is spendthrift enough to fill up the whole page with it.

I can conclude from this evidence only that drawings were not the chief means of communication between architects and builders. The enormous expense and effort devoted to the construction of models for the larger projects suggests that much of the designing went on in plastic form at this stage.[26] Builders, rather than work with detailed specifications, got the gist of the design from the model, and when they encountered problems, they simply got the answer from the architect or supervisor by word of mouth. But the importance of models should not be overestimated: like the presentation drawings they rarely represent the structure that ultimately was built, and in any case they were made only for the most gradiose structures. I think that the average palace and church was built from rough plans and a batch of details.

What is curious about High Renaissance drawings is not that they are so frequently plans and details but that they are so seldom anything else. Sections appear where there

is a vaulting problem, but what I find most surprising is the rarity of elevation drawings, and particularly of façades. A fear of façades is an Italian phobia of long standing that blighted most of the great Gothic structures: Milan Cathedral, San Petronio in Bologna; in Florence, the cathedral, Santa Croce, Santa Maria Novella, Santa Trinità; Santa Maria sopra Minerva in Rome; and others. The loss of many Renaissance drawings does not quite explain away this phenomenon, because it is clear from the surviving ones that the plan dominated architecture as never before or since. In the development of a design we frequently find plan-studies in which the exterior of a building is not even indicated, as is effectively illustrated in Antonio's study for San Giovanni dei Fiorentini (Fig. 6). In churches the great trend toward the central plan was accompanied by a method of design that can be described only as centrifugal. The architect starts drawing in the center and works outwards, and it is not until he has reached a final solution that he begins to consider what the outer face shall be. I have chosen two examples of this procedure (Figs. 7, 8) because it seems to me so revealing of the aesthetic of the period. In the first, which contains further studies by Antonio for San Giovanni in Rome, the only sure thing is the void—a given volume of space—in the middle. Around this, architectural elements appear to explode outward in all directions: a central plan, a longitudinal plan (related to Fig. 6), both with variants. The sense of centrifugal force is heightened by the virtual absence of exterior walls. Peruzzi's study for the crossing of St. Peter's (Fig. 8) is more definite because the piers were already there when he started. But the outward movement is just as strong, and it is emphasized by the fact that elements lose definition in direct ratio to their distance from the center. The cross-section, furthermore, is not drawn as the central portion of a great church, nor even as an isolated chapel, as it seems on first sight, but as a scene such as one would view when standing in the center of the space: a painter's concept of architecture. My impression is that the centrifugal character all comes from the tendency of these architects to visualize themselves in the center of a given space, looking outwards. This is why they were so attached to the central plan and, to go a step farther, to *scenografia*: two ways of making it possible to view the whole environment from a single point.

Even when the architect finally applies himself to the problem of designing the façades he seldom undertakes to make a scale drawing of an exterior elevation. He proceeds from the perfected plan to entrance portals, windows, and entablatures (Fig. 9). The significance of this procedure is that the architect thinks of the elevation as a neutral field into which plastic incidents are set at intervals: often, rather than draw up an elevation, he will explain it verbally in his plan.[27] As a consequence it often happened that the High Renaissance façade could be expanded or contracted at will, and Raphael's work provides a good example of this. The Vidoni-Caffarelli Palace in Rome was almost doubled in length, the façade of the Vatican Palace was tripled in size and twisted into a court (the Cortile di San Damaso); and a large part of the design for the Pandolfini Palace in Florence was left out. I believe that none of the designs suffers much from this treatment. It is important by way of contrast to recall Alberti's demand that the façade be developed as an intricate system of interrelating proportions, giving the wall a vitality in plane; the failure of this principle in the early cinquecento is another example of the strange eclipse of the fifteenth century.[28] Perhaps proportions of this sort were too abstract for the anti-theoretical High Renaissance and had to wait for another Humanist, Palladio, to rediscover their place in architecture. With Palladio, elevations and façades take on a role that they never again lost. I wonder if the absorption of the High Renaissance in Roman ruins does not explain this in part. Architects' drawings after antiquity were almost all plans and details—of necessity, since so few ancient elevations remained elevated. In addition, the study of Vitruvius encouraged the dominance of the plan, since the Hellenistic module is an arithmetic one found in the plan of the column, in contradistinction to Alberti's geometric harmony that integrates plan and elevation in one musical system.

Perhaps the character of Renaissance architecture owes much to the fact that its monuments started, not from a complete idea, fixed in the symbolism of the blueprint, but from flexible impressions constantly susceptible to change. The ultimate statement, like that of the sculptor, evolved in the process of creating the mass itself. This way of conceiving architecture explains also the peculiarly biological character of Italian Renaissance building. The large monuments that took more than a decade to complete seldom followed an original conception, but evolved like a living organism in their growth. The successive architects at St. Peter's, while they held Bramante in reverence, never made the least attempt to carry out what he would have wanted. They took what was there as an inspiration for new ideas, and this habit of working with and in the building itself brought the efforts of many generations to a cohesive conclusion. How different this is from Renaissance France, where at Fontainebleau, Blois, the Louvre, each successive portion of the structure is methodically isolated from its predecessor! It is not chance that Renaissance Italy had no du Cerceau to preserve its projects the moment they had taken form.[29]

When I began to write this paper I expected to finish with a picture of an architect more like today's. But now he appears to be of quite a different species. What I have called his rugged individualism is illustrated first in his unwillingness to be bound by those abstractions we call plans and elevations; second in his refusal to establish a

permanent office staff or even a studio for his own work; and third in his suspicion of theoretical principles and his avoidance of the written word, whether it be his or another's. We are accustomed to caricatures of the bohemian painter and sculptor in the proverbial garret, and the businesslike architect with offices in the commercial district, but in this segment of the Renaissance these roles, in a sense, were reversed. The Roman Renaissance architect was less trained in the technique and less organized in the practice of his calling than any of his contemporaries in the arts. But paradoxically this was a step toward establishing architecture as a respected profession, because it represented, far more than the procedures of painters or sculptors, a liberation from the bonds of the medieval shop system. At this stage the development of the architect's freedom and social stature was more important than the establishment of standards of workmanship.

UNIVERSITY OF CALIFORNIA

1. Antonio appears first in Rome in 1504 as a *falegname* at Castel Sant' Angelo (G. Clausse, *Les San Gallo* [Paris, 1901], II, 45) and in documents of 1510–11 as an assistant to Bramante with the title *faber lignarius* or *carpentarius* (Ackerman, "Bramante and the Torre Borgia," *Rendiconti della Pontificia Accademia di archeologia*, XXV–XXVI (1949–51), 251 ff.). He held the same position in 1513–14.

2. The papal Breve, in which Antonio is appointed at half the salary of Raphael, is reproduced by V. Golzio, *Raffaello* (Vatican City, 1936), pp. 50 f.

3. Benvenuto Cellini, "Discorso dell'architettura," *Opere* (Milan, 1811), III, 249. He says of Antonio: "But because he had been neither a sculptor nor a painter, but rather a master of carpentry only; for this reason one never sees a sign in his work of that certain noble Character (*virtù*) such as is seen in our true Third (the first and second being Bramante and Sangallo), whom we may place first of all, Michelangelo Buonarroti." This was probably written before Michelangelo's death, but remained unpublished until the late eighteenth century.

4. Letter of 1560 or thereabouts, supposedly to the Cardinal Rodolfo Pio of Carpi. Milanesi (*Le lettere di Michelangelo Buonarroti* [Florence, 1875], p. 554) transcribes it from an original in the Archivio Buonarroti, while Schiavo (*Michelangelo Architetto* [Rome, 1949], Fig. 96) reproduces the same text photographically as a leaf from a Vatican codex *3211* (which collection?), Fol. XCVII.

5. For example, in the draft of a letter on a drawing of about 1546 in the British Museum, he says: "I lack the spirit for it because I am not an architect." Wilde, in his recent publication (*Italian Drawings in the British Museum: Michelangelo and his Studio* [London, 1953], No. 70, pp. 108 ff.) associates this complaint with the commission for the Farnese Palace; but the St. Peter's commission is a more likely cause, since Vasari (*Vite*, VII, 218) reports a similar statement in that connection. Wilde notes that Michelangelo objected for the same reason to his first architectural assignment (Milanesi, *Le lettere*, p. 431).

6. Vasari (*Vite*, IV, 157 f.) blames the state of Bramante's structures on the fact that Julius II demanded inordinate haste in construction—"he wanted buildings not to be built but to be born" —but nevertheless adds: "a carelessness which was the reason why his [Bramante's] works are all cracking and stand in danger of ruin."

7. A huge collection of these drawings is preserved in the Uffizi Gallery and many are published in the six-volume work of A. Bartoli, *I Monumenti antichi di Roma nei disegni degli Uffizi di Firenze* (Rome, 1914–22). See also H. Egger, *Kritisches Verzeichnis der Sammlung architektonischer Handzeichnungen der K. K. Hofbibliothek in Wien* (Vienna, 1903), Vol. I.

8. For example, Huelsen's study of the sketchbook of Giuliano da Sangallo, *Il libro di Giuliano da Sangallo; Codice Vaticano Barberiniano Latino 4424* (Leipzig, 1910), pp. xxxvi ff., shows that copies were made from that source by Antonio da Sangallo the younger, Giambattista Sangallo, the anonymous author of the Soane Museum "Coner" Sketchbook, the Anonymous Destailleur, Vasari the younger, Cassiano del Pozzo, and many others.

9. Some of Cronaca's drawings are reproduced by Bartoli, *op. cit.*, Vol. I, Pl. XVI, Fig. 33 to Pl. XX, Fig. 42. Bramantino's notebook is published in facsimile, *Le rovine di Roma* (ed. Mongeri, Milan, 1875).

10. One by Antonio Labacco is in the Uffizi (Manetti, *Vita di Leon Battista Alberti* [2nd ed.; Florence, 1911,] p. 396). A second is in the sketchbook of about 1535–40 attributed to Aristotile and Giovanni Battista Sangallo in the Palais des Beaux-Arts in Lille (*Fonds Wicar*, Fol. 840) and a third, copied from the second, is in a sketchbook of about 1580 by Oreste Vannocci in the Biblioteca Comunale of Siena (*S. IV. 1.*, Fol. 140). The measurements given on these plans are the roughest approximations of the actual dimensions of the building and helped to hide from the sixteenth century the intricate system of proportions employed by Alberti.

11. Brunelleschi's lantern appears in the Lille MS mentioned above (Fol. 726) and in the Siena MS (Fol. 139), where it is compared to Michelangelo's lantern of the Medici chapel in Florence. The plan of Santa Maria degli Angeli appears of Fol. 15 *v* of Giuliano Sangallo's sketchbook (Heulsen, *op. cit.*, p. 27), on a drawing attributed to Jacopo Sansovino (Uffizi, *Arch.* 1949), and in many other sixteenth-century drawings.

12. This church generally is said to have been built by Sangallo in 1507. This is clearly an error, as he was not an architect at that time (see note 1). His activity there dates from the 1520's and no earlier construction is visible in the present church (see my forthcoming book, *The Cortile del Belvedere* [Vatican City, 1954], p. 48, note 2). But Julius II must have founded the church, since it is mentioned among the pope's contributions to Rome by Francesco Albertini, *Opusculum de mirabilibus novae et veteris Urbis Romae* (Rome, 1510).

13. The hospital owned property all along the Via di Ripetta in an area that has always been the artists' quarter of Rome. Antonio rented "property . . . in the new Via del Popolo" from the Trustees as early as 1512 and remained a lessee until his death (*Archivio di Stato*, Rome, Archive of the Ospedale di San Giacomo degli Incurabili, *Libri di Entrata e Uscita*, No. 1142, Fol. 15 *v*, to No. 1198). At a later date, Peruzzi became a tenant as well, and painted for the trustees.

14. According to a document in the archives of Viterbo dated December 8, 1518, Antonio was hired: "ad faciendum palcum subtus tectum Ecclesiae Sanctae Marie in Quercie . . . che detto palco habia essere de quella richeza che è quello de camera de Papa Leone in palazo di Papa in Roma, dove se fa concistorio; et uno palmo piu' sfondato . . ." (from C. Pinzi, "Memorie e documenti inediti sulla Basilica di Santa Maria della Quercia in Viterbo," *Archivio Storico dell'Arte*, III (1890), 322.

15. This competition is reported by Vasari (*Vite*, VII, 498) and by Temanza (*Vite dei più celebre architetti e scultori veneziani . . .* [Venice, 1778], pp. 212 f.) in their Lives of Jacopo Sansovino, and it is mentioned in a letter from Pietro Aretino to Sansovino (reproduced by Giovannoni in *Saggi sull'architettura del Rinascimento* [Milan, 1935], pp. 123 ff.). Modern studies on the early history of the church include two by A. Nava, in the *Archivio della r. deput. romana di storia patria*, LIX (1936), 337 ff., and *Critica d'Arte*, I (1935), 102 ff; and an unpublished Master's thesis by Ruth Olitsky, *San Giovanni dei Fiorentini*, in the Institute of Fine Arts of New York University, 1951.

16. There is no literature on the competition for San Giacomo, but competing designs for the complex were discovered in the Uffizi by Wolfgang Lotz and published in a short notice in the *Mitteilungen des Kunsthistorischen Insts. in Florenz*, V (1940), 441 ff., Figs. 1–3. The only remaining evidence of Sangallo's winning plan is the small church of Santa Maria in Porta Paradisi on the Via Ripetta (Fig. 7, upper left-hand corner), built in 1519–26. The Santo Spirito competition is an hypothesis of mine, I have discovered a plan by Peruzzi (Uffizi, *Arch.* 558) for an unidentified church with an adjoining cloister or court to be built on a plot identical in proportion to the oddly-shaped plot of the present church and court.

17. The competition, which involved Sangallo, Michelangelo, and the painters Perino del Vaga, Sebastiano del Piombo, and Vasari, is recorded by the latter in his Life of Sangallo (V, 470 ff.; the account in VII, 223 conflicts with this), and also in letters published by Gotti, *Vita di Michelangelo, Buonarroti* (Florence, 1875), I, 292 ff. The sources are discussed by Meller, "Zur Entstehungsgeschichte des Kranzgesims am Palazzo Farnese," *Jbh. d. pr. Kunsts.*, XXX (1909), 1 ff. In discussing the competition, Tolnay ("Beiträge zu den späten architektonischen Projekten Michelangelos," *Jbh. d. pr. Kunsts.*, LI [1930], 33 ff.) published an unknown design from the Munich Graphische Sammlung which he attributes to Sangallo. It shows a fourth story or high attic. I believe the attribution is groundless because both the draftsmanship and the architecture are far too feeble to be assigned to the mature Sangallo and because the solution bears no relation to his preserved studies, of which there are several in the Uffizi.

18. Antonio's career is outlined by G. Clausse, *Les San Gallo* (Paris, 1901), Vol. II. The book is obsolete but no other general study exists.

19. Papal Breve of May 28, 1536, reproduced by Pastor, *Storia dei Papi* (1st Italian ed.; Rome, 1924), V, 792, Doc. 20; Breve of January 14, 1538, *ibid.*, pp. 796 ff., and several other authors.

20. Letter of May 11, 1555 to Vasari (*Lettere*, ed. Milanesi, p. 537, from the Archivio Buonarroti): "Io fu messo a forza ne la fabrica di Santo Pietro, e ò servito circa otto anni non solamente in dono, ma con grandissimo mie danno e dispiacere."

21. The following data were culled from the nearly 1000 documents on the construction of St. Peter's during this period published by Karl Frey ("Zur Baugeschichte des St Peter: Mittheilungen aus der R.da Fabbrica di San Pietro," *Jbh. d. pr. Kunsts., Beiheft* to XXXI [1911], 1 ff.; *Beiheft* to XXXII [1913], 1 ff.)

22. The exact source of this document is unknown. It was published by Umberto Gnoli, "Le Palais Farnese (Notes et Documents)," *Mélanges de l'Ecole Française de Rome*, LIV (1937), 209 ff., from the transcripts that his father, Domenico, had made in the Archivio di Stato, Rome.

23. On Meleghino's career, see K. Frey, "Studien zu Michelangelo Buonarroti u. der Kunst seiner Zeit," Part III, *Jbh. d. pr. Kunsts., Beiheft* to XXX (1909), 138 f.

24. This letter and the two accompanying drawings are in the Uffizi drawing collection, *Arch.* 302. The text is reproduced by Milanesi in his edition of Vasari's *Vite*, V, 487.

25. The term is used in the *Vite*, VII, 218. The Sangallo group must have included Antonio's brother, Giovanni Battista (il Gobbo), his cousins Aristotile and Francesco, Nanni di Baccio Bigio, and Antonio Labacco, among others. The cohesiveness probably was due to the fact that most of them owed their jobs to Antonio and that after his death they were not imaginative enough to continue ahead with Michelangelo. Vasari repeats a story that shortly after Antonio's death the "clique" confronted Michelangelo with the sententious statement that Antonio's model for St. Peter's was "a field that will never cease to be a pasture." "You are quite right," Michelangelo reportedly answered, "if you are talking of sheep and cows, who do not understand art."

26. Antonio's model for St. Peter's, which still exists, was built for him by Antonio Labacco. It took from 1539 to 1546 to complete, and Frey estimated the cost at between 5500 and 6000 ducats. To judge from the salary paid to the chief architect of the Holy See (see p. 5) a ducat ought to be over $10 in today's exchange. Michelangelo's model for the dome of the Basilica cost about 600 ducats. Cf. K. Frey, "Studien zu Michelangelo Buonarroti," *Jbh. d. pr. Kunsts., Beiheft* to XXX (1909), 167 ff., 171 ff.; *idem*, "Zur Baugeschichte des St. Peter," *Jbh. d. pr. Kunsts., Beiheft* to XXXIII (1913), 21 ff.; *Beiheft* to XXXVII (1916), 81 ff.

27. Interesting examples of this are Peruzzi's early study for the Palazzo Massimi in Rome and a church plan by Antonio Sangallo. The first (Uffizi, *Arch.* 368, reproduced by L. Venturi, *Storia dell' arte italiana* [Milan, 1938], XI, 1, p. 417, Fig. 387) is a plan of the palace accompanied by a text explaining the façade: "In front of the portico metopes XX and triglyphs XXI height of the columns with base and capital palmi XX and thickness palmi two and one half that is II½." In Sangallo's sketch (Uffizi, *Arch.* 168, reproduced by Gab. Fot. della Sopraintendenza alle Gallerie, Florence, No. 14389), the plan of a centralized church (study for S.M. in Monserrato?) is accompanied by the text: "This may be vaulted in two ways. The first, or cheaper, is this: the curve (*sexto*) of the cupola is begun at the same level as the impost of the great arches and the dome is built as a cloister vault (*vela*). The second way is to make a cornice at the top of the arches constructed to a perfect circle and above this to go on straight so that you may cut in apertures of any kind you want or windows or even roundels. And over the said apertures make another round cornice from which you may begin to spring the cupola; but first keep it straight (i.e., "continue vertically") for a distance of 2½ times the projection of the cornice (an optical correction to make visible a full hemisphere)."

28. On Alberti's principles of design, see R. Wittkower, *Architectural Principles in the Age of Humanism* (London, 1949), pp. 40 f., 94 ff.

29. But it may be coincidence that we know Michelangelo's designs mostly through the engravings of Frenchmen: Beatrizet, Dupérac, Le Mercier.

FRANCESCO MILIZIA, 1725 – 1798

WILLIAM B. O'NEAL

On October 24,1824 Thomas Jefferson wrote to his grandson-in-law, Joseph Coolidge, Jr., saying, "I ought sooner to have thanked you for the valuable work of Milizia, on Architecture. searching, as he does, for the sources and prototypes of our ideas of beauty in that fine art, he appears to have elicited them with more correctness than any other author I have read, and his work, as a text book, furnished excellent matter for a course of lectures on the subject, which I shall hope to have introduced into our institution." [1]

Who was this Milizia and what did he do to gain such admiration from Jefferson? He was one of the group of neo-classicists centered around Rome and his writings, or at least some of them, went through many editions staying in print through the editorship of others as long as seventy-seven years after his death, as well as spreading through translations into many countries.

Francesco Milizia was born at Oria in the province of Otranto, a part of the Kingdom of Naples, in 1725. His parents were noble and in comfortable circumstances. At the age of nine he was placed in charge of an uncle, his mother's brother, who was a physician in Padua, but at sixteen he ran away to Rome where he joined his father. This early scientific training is apparent later in his written work, quite directly in a little book of 1770 called *Del salasso* ("Concerning the Lancet"), and indirectly in his passion for classification. His father sent him on to Naples where he studied physics and geometry with Padre Orlandi and logic and metaphysics under Genovesi.[2]

Later Milizia ran away once more to travel in France but lack of money forced him to turn back at Leghorn. He then seems to have lived rather lazily but somewhat studiously with his family at Oria until his marriage in 1750 with a rich young lady of Gallipoli. Some years after the marriage her father settled an allowance on Milizia and with this assured income we find him settled in Rome by 1761. There three things happened which influenced his future. He plunged into the study of architecture; he became a member of the circle of friends which revolved around Azara, Mengs, and Winckelmann; and, although he seems never to have practised or taught the art of architecture, he received the appointment of Superintendent of Buildings in the Papal See for the King of the Two Sicilies.

Through his contacts with Azara he was thrown into the center of the neo-classic world. Azara himself was both a patron of the arts and sciences and an editor. Born Jose Nicolas de Azara, Marquis of Nibbiano, at Barbunales in Aragon in 1730, he became the Agent General of Spain to Clement XIII in 1765, the Minister Plenipotentiary to the Papacy in 1784 and the Ambassador to Paris between 1798–99 and again between 1801–03. He was not only an able diplomat and a friend to at least three popes, but while he was in Rome he gathered about himself a group of students and writers. Antonio Canova (1757–1822), Anton Raphael Mengs (1728–79), and Johan Joachim Winckelmann (1717–68) are perhaps the most eminent of the group, and it was into this brilliant milieu that Milizia entered after he took up residence in Rome. Azara edited the written works of Mengs; he worked on an edition of Vergil and Bodoni; and he helped with the first edition, edited the second, and very much enlarged the Italian translation by Milizia of *An Introduction to the Natural History and Physical Geography of Spain*, by William Bowles. His death occurred on January 26, 1804.

By 1768 Milizia was ready for his first publication, *Le vite di più celebri architetti d'ogni nazione e d'ogni tempo*. This was followed in the same year by a second issue under the title *Memori degli architetti più celebri*, and was so known through its subsequent Italian editions although in translation it reverted to the original title. It was almost more of a history than a series of biographies; it went through four Italian editions, was included in the collected works, and translated into both French and English.

This was the first of a long series of works. Indeed, Milizia seems to have been the work horse of the group with which he associated, compiling, translating, and from time to time contributing a flash of creative thought. He lashed out at the common current ideas, sometimes shocking the public so much that a book such as his *Del teatro* (1772) would be withdrawn only to be reissued later in another city. One of these *scandales d'estime* was so great that he not only withdrew the portion of the work, *Roma, delle belle arti di disegno* (1787), he had already published, but he refused to issue the remainder of the work,

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gave up writing about the fine arts, and devoted the rest of his life to natural history.

His most important work was the *Principi di architettura civile*, first issued in 1781. The third edition of the *Principi* is that referred to in Jefferson's letter. It is a work in which every part of a building must be "rational," and he shows a "grand admiration" for what he calls "majestic Greek elegance" and "gothic sveltness." In it he attempted to base the art of architecture on rational principles, exposing pedantry and what he felt were false tenets. As a consequence young architects admired him but older teachers thought he had gone too far. He was not in the least afraid of established reputations or famous names, going so far as to attack Michelangelo for "perturbing" the classic rules, as well as Borromini for his "frenetic mass." These attacks continued in Milizia's *Arte di vedere*, the second of his books to appear in 1781. It was even more fearless and unsparing that the *Principi*, for he does not hesitate to say "when architecture was at the highest, Michel Angelo, with the sublimity of his intellect overthrew all, filling all with caprice. It is not always that the most learned bear the sway. He imposed upon the Fontanas, the Portas, and the Ammanati of succeeding periods; he spoiled his own age, and prepared the way for a worse."

One writer sums him up by saying that his works are pervaded with severity of criticism and a tone of causticity; he finds as much fault as possible with every work of architecture, giving good qualities slight prominence; he undoubtedly possessed, however, an intimate knowledge of architecture and overthrew many incorrect ideas based on false principles; his works greatly promoted the dissemination of the principles of pure architecture; and he abhored pedantry, dogmatism, quackery, and false enthusiasm.[3]

In 1782 Milizia resigned his Superintendency for the King of the Two Sicilies. From then until his death he was busy with new works, new editions of already published works, translations into Italian of the works of others, and translations into other languages of his own works. After his death in Rome during March, 1798 we find his writings being issued with astonishing frequency. By 1817 another editor had enlarged and revised the *Principi*, a book which was reissued as late as 1875. At the same time the *Principi* in its original form was still in print. Between 1826–28 all his works were gathered together into a definitive edition, while his individual books were often translated into Spanish, French, German, and English.

Articles about Milizia began to appear as early as 1808 and have continued with some frequency up until 1938, the last date at which it has been possible to find a printed reference to him. Italian, Dutch, French, and English authors have referred to him during the century and a half since his death, and he has been mentioned by no less a figure than Benedetto Croce in his *Problemi di estetica* (1923).

The attached bibliographies and the chronology of his life are an attempt to put into some order the available information about his writing. From them some idea of the activities of this neo-classicist, so much admired by Jefferson, may be gained.

UNIVERSITY OF VIRGINIA

1. Original owned by Harold J. Coolidge. Another manuscript copy is in the Massachusetts Historical Society, Boston. Printed in Paul Lester Ford, *The Works of Thomas Jefferson*, New York, 1892–99, X, 323–24.

2. Antonio Genovesi (or Genovese) was born at Castiglione, near Salerno, Nov. 1, 1713, and died Sept. 23, 1769. He was trained at the seminary of Salerno, went to Naples in 1738, and established himself there as a teacher, philosopher, copious writer, and servant of the state.

3. Shearjashub Spooner, *Dictionary of Painters, Engravers, Sculptors, and Architects*, 1853.

BOOKS BY FRANCESCO MILIZIA

1. DEL SALASSO

Del salasso. Roma: A. Casaletti, 1770. 12mo, 58 pp.

2. DEL TEATRO

a. *Del teatro*. Roma, 1772. 8vo, pl.
b. *Del teatro*. Venezia: Presso Giambatista Pasquali, 1773. 4to, viii+100 pp., pl. and engraved title.
c. *Discorso sul teatro*. Venezia, 1789.
d. *Trattato completo, formale e materiale del teatro di Francesco Milizia*. (Nuova ed.) Venezia: nella stamperia di P. e G. B. Pasquali, 1794. 4to, 104 pp., engraved title, 6 fold. pl. (incl. 4 plans).
e. *El teatro; obra escrita en italiano, por D. Francisco Milizia;* y traducida al español por D. J. F. O. Madrid: En la Imprenta real, 1789. 237 pp.

(NOTE: Although Conte Melzi Gaetano, in his *Dizionario di opere anonime e pseudonime di scrittori italiani, o come che sia aventi relazione all'Italia;* di G. M. . . . Milano, Coi torchi L. di Giacomo Pirola, 1848–59, states the first edition of *Del teatro* was published in 1772, the Library of Congress seems to have traced one published in 1771.)

3. DELL' ARTE DI VEDERE

a. *Dell' Arte di vedere nelle belle arti del disegno secondo i principj di Sulzer e di Mengs*. Venezia: Presso G. Pasquali, 1781. 8vo, 1 pl. 166 pp.
b. (Another edition) 1792.
c. (Another edition) 1798.
d. (Another edition) 1813.
e. *Dell' Arte di vedere nelle belle arti del disegno secondo i principii di Sulzer e di Mengs, operetta di Francesco Milizia*. Venezia: impr. di Alvisopoli, 1823. 16mo, 136 pp.
f. *Die Heurtheilung des Schonen in den zeichnenden Kunsten nach den Grundsätzen eines Sulzers und Mengs*. Aus dem italienischen übers. von m. C. Fr. Prange. Halle: J. C. Hendel, 1785. 20 cm., (7), 128 pp. Title vignette; head and tail pieces.

g. *De l'art de voir dans les beaux-arts.* Traduit de l'Italien de Miliziá. Suivi des institutions propres à les faire fleurir en France, et d'un état des objets d'arts dont ses musées ont été enrichis par la guerre de la Liberté. Par le general Pommereul. Paris, an VI. (1798). 8vo, viii+316 pp., 4 pl.

h. *Arte de ver en las bellas artes del Diseño, segun los principios de Sulzer y de Mengs, escrito en Italiano por F. de M.* y traducido al Castellano con notas e illustraciones por D. J. A. Cean-Bermudez. Madrid: Imprenta real, 1827. 8vo, xv+247 pp.

(NOTE: Juan Agustin Cean Bermudez, 1749–1829, entered the studio of an ardent follower of Mengs in Seville, and then himself followed Mengs to Rome. He returned to Spain to paint, to help found an Academy of Art, to index the general archives of the Indies, and to publish a Historical Dictionary of the most illustrious teachers of the fine arts in Spain.)

4. DIZIONARIO DELLE ARTI

a. *Dizionario delle arti del disegno,* 1787.

b. *Dizionario delle belle arti del Disegno, estratto in gran parte dalla Enciclopedia metodica da F. M.* 2 vols. Bassano, 1798. 8vo.

c. (Another edition) 2 vols. in I. Milan, 1802. 8vo.

d. (Another edition) 2 vols. Milano: P. Agnelli, 1804. 8vo.

e. *Della Incisione delle Stampe. Articolo tratto dal Dizionario delle arti del disegno di F. M.* Corretto, e molte notizie arrichito. Bassano, 1797. 8vo.

5. ECONOMIA PUBLICA

Economia publica. Milano, 1803. 59 pp.

6. LETTERE

Lettere. Collezione de' Classici Italiani. 1804, etc., Vol. 351.

7. LETTERE DI FRANCESCO MILIZIA

a. *Lettere di Francesco Milizia al conte Fr. di Sangiovanni, ora per la prima volta pubblicate.* Parigi: G. Renouard, 1827. 12mo, xxii+168 pp.

(NOTE: There seem to be several issues or editions during the same year at Paris: (a) Some with a facsimile of the author's handwriting. (b) Some without the facsimile of the author's handwriting, but on large blue paper, 21 cm. (c) Some at 19 cm. Whether they all contain "une notice tirée en partie de l'Histoire de la litérature italienne dans la 2e moitié du XVIIIe siècle, par Camillo Ugoni," or not is unknown.)

b. (Another edition) Brusselles: Presso H. Tarlier, 1827. 16½ cm., xxiii+168 pp.

8. LE VITA DI' PIU CELEBRI ARCHITETTI

a. *Le Vita di' più celebri architetti d'ogni nazione e d'ogni tempo, precedute da un saggio sopra l'architettura* (per Giuseppe Antonio Monaldini. Anon.). Roma: nella stamperia di Paolo Giunchi Komarek, 1768. 4to, viii+429 pp., plates, vignettes.

b. *Memori degli Architetti più celebri.* 2 vols. Roma, 1768. 8vo.

(NOTE: Another issue in quarto ?)

c. *Memorie degli Architetti antichi e moderni.* Terza edizione accresciuta et corretta dallo stesso autore Francesco Milizia. 2 vols. Parma: Stamperia reale, 1781. 8vo.

d. *Memorie degli Architetti antichi e moderni.* Quarta edizione accresciuta e coretta dallo stesso autore Frencesco Milizia. 2 vols. Bassano: A spese Remondini di Venezia, 1785. 8vo.

e. *Vies des Architectes anciens et modernes qui se sont rendus célèbres chez les différentes nations;* Traduites de l'Italien et enrichies de notes historiques et critiques per M. Pingeron. 2 vols. Paris: Chez C.-A. Jombert, 1771. 12mo.

f. (Another edition in French, translated by Pommereul, with an *Essai sur l'histoire de l'architecture, précédé d'observations sur le bon gout et les beaux arts*). 3 vols. La Haye, 1819. 8vo.

g. *Lives of the celebrated architects, ancient and modern; with historical and critical observations on their works, and on the principles of the art.* By Francesco Milizia. Translated from the Italian by Mrs. Edward Cresy. With notes and additional lives. 2 vols. London: J. Taylor, 1826. 8vo.

(NOTE: Mrs. Edward Cresy [Eliza Taylor] was the wife of an English architect who had spent considerable time traveling in Italy and Greece, and whose work after his return to England was concerned both with publishing the results of his foreign study and with sanitation.)

h. *The edifices of A. Palladio, forming a selection from his most admired buildings, from drawings and measurements taken at Vicenza.* By F. A. [Francis Arundale] [The life of A. Palladio, translated from the Italian of Milizia.] London, 1832. fol.

(NOTE: Francis Arundale, 1807–1853, was an architect who studied with Augustus Pugin, and helped him with his *Architectural Antiquities of Normandy.* Arundale lived abroad a great deal, traveling in Egypt, in Palestine with Catherwood and Bonomi, in Greece, Italy, Sicily, and France. He never practised, but painted large pictures from his studies in the Near East.)

9. NOTIZIE

a. *Notizie di Francesco Milizia scritte da lui medesimo. Con un catalogo delle sue opere.* Venezia, 1804. 8vo.

b. (Another issue ? edition ?) *Notizia intorno alla sua vita, scritta da lui medesimo, col catalogo delle sue opere.* Bassano, 1804. 8vo.

10. OPERE COMPLETE

Opere complete di Francesco Milizia, resguardanti le belle arti. 9 vols., Bologna: Stamperia Cardinali e Frulli, 1826–28. 8vo., fold. plates, fold. plans. I. *Opuscoli diversi,* 1826. II.–III. *Dizionario delle belle arti del disegno,* 1827. IV.–V. *Memorie degli architetti antichi e moderni,* 1827. VI.–VIII. *Principii di architettura civile,* 1827–28. IX. *Saggio di architettura civile e lettere risguardanti le belle arti,* 1827.

11. PRINCIPI DI ARCHITETTURA CIVILE

a. *Principi di architettura civile.* 3 vols. 1781. 8vo.

b. *Principj di Architettura Civile.* 3 vols. Bassano: A spese Remondini di Venezia, 1785. 8vo., folding tables, diagr.

c. *Indici delle figure relative ai Principi di architettura civile* . . . dosegmate de omcose. . . . da G. B. Cipriani. (1 vol.), Roma, 1800. Finale, 35 pl., 1 tab.

d. *Principj di architettura civile di Francesco Milizia.* 2. ed. veneta, riv., emendata, ed accresciuta di figure disegnate ed incise in Roma da Gio. Battista Cipriani sanese. 3 vols., Bassano: Nella Tipografia remondiniana, 1804. Fold. plates, fold. plans, fold. tab.

e. *Principj di architettura civile.* 3. ed. rev., emend. ed accresciuta di figure disegnate ed incise in Roma da Gio. Battista Ciprianj sanese. 3 vols., Bassano: Remondini, 1813. 8vo., plates, tables.

f. (Another edition) 3 vols. Bassano, 1825. 8vo.

g. *Osservazioni ed aggiunte* [by Antolini] *ai Principii di architettura civile di F. Milizia.* Milano, 1817. 8vo., 10+219 pp.

h. *Principj di architettura civile,* prima edizione Milanese illustrata da Giovanni Antolini, con 36 tavole, in rame. Milano, 1832. 8vo.

i. *Principi di architettura civile,* illustrati da Giov. Antolini

2a ediz. migliorata da L. Masieri. Milano: Majocchi, 1847. 8vo., 596 pp., 33 pl.

j. *Principj di architettura civile,* illus. dal . . . Giovanni Antolini con nuove osservazione e note in aggiunta alle gia edite del 1817. 3. ed. . . . migliorata per cura del. . . . Luigi Masieri. Milano, 1853. 601 pp., front., fold. plates, fold. plans, fold. diagrs.

k. (Another edition) 3 vols. Bassano: Remondini, 1875. 8vo.

(NOTE: Giovanni Antonio Antolini, 1754–1842, studied architecture at Bologna and Rome. He became Professor of Architecture at Bologna, but left *c.* 1804 because of political difficulties. He took up a similar position at the Academia di Brera, Milan, until his death. A neo-classicist, he designed a proposed Foro Bonaparte for Milan, executed many buildings at both Milan and Venice, and published a good many books concerning architecture.)

12. ROMA DELLE BELLE ARTI

Roma delle Belle Arti di Disegno. Pt. i, Dell' architettura civile. Bassano, 1787. 8vo, 210 pp.

(Note: No other parts were published.)

TRANSLATIONS BY FRANCESCO MILIZIA

1. *Introduzione alla storia naturale e alla geografia fisica di Spagno di Gugliemo Bowles;* pubblicata e comentata dal cavaliere D. Giuseppi Niccola d'Azara, e dopo la seconda edizione Spagnuola più arrichita di note. Tradotta da Francesco Milizia. 2 vols. Parma: Stamperia reale [Bodoni], 1783. 4to.

(NOTE: William Bowles, an Irishman, 1705–1780, gave up the legal profession, went to Paris in 1740, and studied natural history, chemistry, and metallurgy. In 1752 he was persuaded to enter the Spanish service to superintend the state mines, to form a collection of natural history, and to set up a chemical laboratory. His book, *Introducion a la historia natural, y a la geografia fisica de Espana,* was first issued in 1775 in Madrid. Both the first and second (1782) editions were edited by Azara. By 1776 it had been translated into French by the Vicomte de Flavigny, and, of course, into Italian by 1783.)

2. *La storia dell' astronomia de M. Bailly,* ridotta in compendio dal signor Francesco Milizia. Bassano, 1791. 8vo, viii+180 pp.

(NOTE: Jean-Sylvain Bailly, 1736–1793, the son of the Keeper of the Pictures of the King, showed an early interest in astronomy. He published political tracts, and books and articles on animal magnetism and astronomy. Entering political life during the early stages of the French Revolution, he was guillotined on the accusation of helping Louis XVI on the flight to Varenne, and for the massacre of the Champs de Mars, which happened during his mayorality and on his order. His *Histoire de l'astronomie ancienne* was published in 1775, and his *Histoire de l'astronomie moderne* in 1779–82.)

ARTICLES AND BOOKS ABOUT FRANCESCO MILIZIA

1. L. Cicognara, *Memorie intorno all' indole e agli scritti di F. Milizia e progetti di publicare alcune sue lettere inedite: atti della societa italiana,* 1808, II, 440.
2. ———, *Storia della sculture,* Prato 1823–24, V, 130–131, 136–138; VI, 168 n. I; VII. 61–62, 72–73, 99 con la n. I.
3. Shearjashub Spooner, *Dictionary of Painters, Engravers, Sculptors, and Architects,* 1853.
4. Giovanni Nocco, *Discorso biografico di Fr. Milizia da Oria,* 1877.
5. Charles Lucas, *La grande encyclopedia,* 1886.
6. Russell Sturgis, *A Dictionary of Architecture and Building,* London, 1905.
7. L. Hautcoeur, *Rome et la renaissance, de l'antiquité à la fin du XVIIIe siècle,* Paris, 1912, pp. 112–118.
8. A. E. Brinckmann, *Die Baukunst des 17. und 18. Jahrhunderts,* Neubabelsberg, 1915, p. 143.
9. Giulio Natali, *Un enciclopedista classicista: Fr. Milizia,* 1915.
10. B. Croce, *Problemi di estetica,* Bari, 1923, pp. 390, 391, 393.
11. J. Scholsser, *Die Kunstliteratur,* Vienna, 1924, pp. 447, 525, 580–581, 589–590.
12. Giulio Natali, *Idee costumi uomini del settecento,* 2a ed., Torrino, 1926, pp. 341–356.
13. ———, *Il settecento,* Milano, 1929, *passim.*
14. G. Rontanesi, *F. M. scrittore e studioso d'arte,* Bologna, 1932.
15. Giulio Romano Ansaldi, *Enciclopedia italiana,* 1934.
16. T. H. Fokker, *Roman Baroque Art,* London, 1938, Vol. I, p. 1.

CHRONOLOGY OF FRANCESCO MILIZIA'S LIFE AND PUBLICATIONS

1725	Born at Oria, Otranto, Kingdom of Naples.
1734	At Padua, trained by a maternal uncle, a physician.
1741	Runs away to Rome; later sent by father to Naples to study with Genovesi and Orlandi.
1750	Marries.
1761	Settles in Rome; studies architecture.
?	Superintendent for buildings in the Papal See owned by the King of the Two Sicilies.
1768	*Le vite* published; later same work appears in same year under title *Memorie.*
1770	*Del salasso* published.
1771	*Memorie* translated into French; *Del teatro* published (?).
1772	*Del teatro* published.
1773	Second edition of *Del teatro.*
1781	*Memorie,* new edition; *Dell' Arte* published; *Principi* published.
1782	Resigned Superintendency.
1783	Translated and published Bowles' *Natural History of Spain.*
1785	*Memorie,* new edition; *Principi,* new edition; *Dell' Arte* translated into German.
1787	*Dizionario* published; *Roma* published.
1789	*Teatro,* new edition; *Teatro* translated into Spanish.
1791	Translated Bailly's *History of Astronomy.*
1792	*Dell' Arte,* new edition.
1794	*Teatro,* new edition.
1797	*Dizionario,* new edition; excerpt from *Dizionario* published separately.
1798	Dies at Rome.
1800	Cipriani's illustrations for the *Principi.*
1802	*Dizionario,* new edition.
1803	*Economica* published.
1804	*Notizia* published; letters in *Coll. de' classici italiani* published; *Dizionario,* new edition; *Principi,* new edition with the Cipriani illustrations.
1813	*Dell' Arte,* new edition; *Principi,* new edition.
1817	*Principi* with Antolini's additions published.
1819	*Memorie* has second French translation.
1825	*Principi,* new edition.
1826	*Memorie* translated into English; publication of *Opere complete* begun.
1827	*Dell' Arte* translated into Spanish; *Lettere* published in Paris and Brussels; publication of *Opere complete* continued.
1828	Publication of *Opere complete* completed.
1832	The Antolini *Principi,* new edition.
1847	The Antolini *Principi,* new edition.
1853	The Antolini *Principi,* new edition.
1875	The Antolini *Principi,* new edition.

MORE ABOUT ASHER BENJAMIN

FLORENCE THOMPSON HOWE

IT IS SOMEWHAT ironic that the important architect who sired the first original architectural book to be published in the United States and exerted so profound an influence on subsequent American architecture through his six succeeding publications totaling forty-four editions,[1] should literally be unknown to us so far as the facts of his personal life and architectural commissions are concerned.

To many, the title of Benjamin's first book, the *Country Builder's Assistant*, published in Greenfield, Massachusetts, in 1797, would seem to imply that the author, if a practicing architect at all, was concerned chiefly if not wholly with raising the architectural standards in "the provinces."

Talbot Hamlin, in referring to the stylistic influence of Asher Benjamin, states that "he, more than any other person is responsible for the character we call roughly 'Late Colonial'; his moldings, his doors and windows and his mantels and cornices decorate or at least inspire the decoration of numberless houses up and down the New England coast and in the New England river valleys."[2] Subsequent findings indicate that his handbooks were used widely in Ohio and the adjacent Midwest.

Such notable structures as West Boston Church; Center Church, New Haven;[3] the Meeting House in Windsor, Vermont, and such admirable houses as the Coleman-Hollister, in Greenfield, Massachusetts; the Hatch, Fullerton and Hubbard at Windsor, Vermont; Samuel Hinckley, Northampton, Massachusetts; Colton, Longmeadow, Massachusetts; Alexander, Springfield, Massachusetts; Asa Water, Milbury, Massachusetts; Luke Baldwin, Brookfield, Massachusetts; the Academy at Deerfield, Massachusetts, and his Beacon Hill houses in Boston indicate how deservedly he merits the sharp attention of the architectural historian.

Sporadic references to Benjamin's proposed architectural school appear in statements by men who claim to have studied with him. These include Robert Henry Eddy, Elias Carter, Solomon Willard, Samuel Shepherd and Ithiel Town. Simeon Sanborn, Mordecai Wallis, Elias Savage and Ithiel Town are among the many who built from his designs or even under his supervision. An advertisement of the proposed school actually appeared in the Windsor, Vermont, *Gazette* on January 19, 1802, inviting students to the study of architecture under Asher Benjamin. We do not know that this school ever materialized. If it did it must have been the first architectural school set up in this country and as such would add further distinction to the contributions of Asher Benjamin. The fact that he proposed to establish such a school would appear to indicate not only a professional self-confidence on the part of Benjamin, but also his recognition of the need for trained native architects if the character of our new buildings were to have merit consonant with the high ideals upon which our country was founded.

If the school did develop, it may have done so subsequently in Boston. A Benjamin letter preserved in the Gallatin papers of the New-York Historical Society addressed to Gideon Granger (Postmaster-General under Thomas Jefferson) apparently in the handwriting and bearing the signature of "Asher Benjamin" is dated Boston, August 5, 1802. We find Benjamin listed in the Boston directories almost continuously from 1803 to 1845 with the exception of the years 1825–28. The letter in question is of sufficient importance to quote in its entirety. It authenticates the Windsor, Vermont, attributions, cites other examples of his early work, and establishes his business classification. It also provides the clue which led to the shifting of my research efforts to Connecticut where I eventually secured important vital statistics of the Benjamin family confirming their early association with Connecticut rather than Massachusetts. The letter is as follows:

Boston August 5th 1802
The Hon'ble Mr. Granger
Sir:

I take the Liberty to address you on the subject of a Building for a Hospital. I saw an advertisement in the Chronicle (a paper printed here) offering a premium of 50 dollars for the most approved plan for a hospital. I have therefore drawn one and sent it to the Secretary of the Treasury. If it should or should not be approved I should be glad of the job of building the hospital. I am informed that it is to be built in Boston or its vicinity where I now carry on the carpenter's business. I therefore beg the favor of your interceding with the Secretary of the Treasury in my behalf.

Sir I can prove any responsibility that he shall wish for the fulfillment of the work.

Sir, I have since I left Suffield built the following houses: Viz: Samuel Hinckley, Northampton. William Colmans, Greenfield. Luke Baldwin, Brookfield. A meeting-house and three other large houses in Windsor, Vermont. The Academy at Deerfield. Sir, if you will take the trouble

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to do me the kindness requested you will oblige your friend. I have the honour to be very respectfully yours,

Your obedient servant
Asher Benjamin

Granger's letter to Gallatin, dated August 13, 1802 (likewise at the New-York Historical Society), provides in part an important clue to the professional status of Benjamin at this early date:

Gideon Granger presents his compliments to the Secretary of the Treasury and takes the liberty of inclosing a letter from a young gentleman who he knows to be one of the first mechanicks in New England. From a poor boy unaided by friends, by his indefatigable industry and talents in a few years he has raised himself to the first rank of his profession.

In turn, Gallatin sent a note to President Jefferson in connection with this matter and Jefferson's laconic reply (also in the Gallatin Papers, New-York Historical Society) was as follows:

Altho the plan of the hospital has but moderate merit yet having no other I suppose we must use it and using it, pay for it. I presume therefore we may at once adopt it and call for estimates and undertakers.

Was this building incorporated in the present Naval Hospital at Chelsea? Or was Benjamin's Marine Hospital torn down and the present institution built on its site?

In the long interval between 1802 and 1845, the Boston Directories provide clues for the rising professional status of Asher Benjamin, who is successively listed as *carpenter, housewright, paint store proprietor* with residence on Poplar Street, and finally as *architect,* with residence in desirable West Cedar Street on fashionable Beacon Hill.

As an index to his changing status, it should be noted that he designed West Boston Church in 1806 and Center Church, New Haven, in 1817. Special interest develops with regard to his association with the design and building of the canal locks at Dunstable (now Nashua), New Hampshire, for the Nashua Manufacturing Company and his appointment as that company's first agent (1826–28).[4] During this period he laid out the streets of the village and with Daniel Abbott constituted a committee to provide a school house and church for the village. This coincides with the three years during which his name does not appear in the Boston Directories.

The *History of Nashua,* edited in 1897 by E. E. Parker, records: "Asher Benjamin was identified for some years with the early days of Nashua and through his pupil Samuel Shephard, his influence extended for many years. His tastes were classic and not especially adapted to the wants of a manufacturing town. The most notable example of his art and one of real excellence was the Olive Street Meeting House. This, as seen from Main Street presented a fine Grecian front, crowned with a cupola of great beauty; with the hill as a base. It was a most effective bit of art. The cupola on the old First Church and also on the City Hall and the front of the Unitarian Church bear marks of his taste and skill." His selection for this work at Dunstable clearly indicates recognition of Benjamin as architect, engineer and planner.

It can be assumed without question that by 1836 Benjamin had become one of the leaders in his profession in Boston, one of a group in the nation who was concerned with protecting the standards of the profession they served. This is evidenced by the fact that he was one of the founders of the society which is still the controlling national organization of architects in the United States. Everard Upjohn writes: ". . . the American Institution of Architecture [now American Institute of Architects] was founded at a meeting in the Astor House, New York, on December 6, 1836. Alexander J. Davis was appointed chairman and Thomas U. Walter secretary. . . . Ithiel Town, Minard Lefever, Asher Benjamin, Alexander Parris and Ammi B. Young endorsed the movement."[5]

One of Asher Benjamin's last commissions, which was indeed one of the principal country mansions in the Boston area, was executed for a gentleman of wealth and taste who was able to demand the services of an architect of the highest caliber. The building in question was Belmont, from which one of the suburbs of Boston eventually took its name. The client was John Perkins Cushing (1787–1862). Cushing was ". . . one of the wealthiest and most benevolent citizens of Massachusetts . . . ."[6]

The house Benjamin designed for Cushing was of masonry construction; the main façade was 76 feet 6 inches in breadth. The depth of the house measured 61 feet exclusive of the swell or bow front. Two and a half stories high (parlor story 13 feet 7 inches between timbers, chamber story 11 feet 6 inches), the house is designed with monumental simplicity in the Greek taste. Ten one-story marble Tuscan columns enrich the bow front and portico at the left (Fig. 1). Chaste iron balconies, a second-floor gallery and an entrance portico on the main façade are contrived with restraint and elegance (Fig. 2).

Contracted for on March 10, 1840, at a time when $3,500 would build a house of some pretension, Belmont cost $19,892. The specifications[7] constitute a document of major importance in connection with work on Benjamin in that they reveal intimately the highly professional concern of the architect to assure that his design intention is specifically carried out. He thinks in terms of carefully selected and varied materials, shows himself to be markedly progressive in devising utilitarian features such as plumbing layouts, hot air ducts to warm bathrooms, and other conveniences to make the house a model of comfort and convenience.

All the exterior walls of the house and out houses must be double and made of brick as hereinafter described.

[Mention is made of the use of Connecticut stone, marble, slate, various iron devices and other architectural details.] . . . The jambs, hearths, and other brickwork of both kitchen fireplaces must be made with face brick. . . .

In the upper kitchen provide and set one of Stimpson's large size kitchen ranges complete, and convey the hot air from the back of it into the bathing room back of the nursery. Provide and set one copper kettle . . . also make a reservoir of the same size with said cistern and in like manner, into which all the waste water from the house will enter, to be distant 600 feet from the cesspool and near the grove and provide the same with a good pump by which the contents can be raised and distributed about the farm. Make a vault under the necessary near the kitchen . . . the floor of which must be so inclined as to cause the liquid that falls upon it to immediately run off.

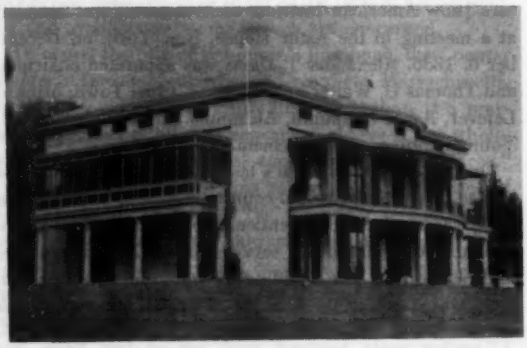

Fig. 1. "Belmont." View from the southeast. (The Boston Athenaeum)

Make a kind of vault or floor in like manner under the water closets near the library. . . .

Make a drain of like form, size and materials from the necessary vault to the lower cesspool and from under the water closets to the same place; and from the termination of these drains make a drain of like materials and form, but 20″ in diameter, which shall extend so as to empty into the reservoir near the grove before described.

The specifications extend through five legal-size pages and the articles of agreement cover two similar pages. Both appear to be executed in Benjamin's hand (although it seems likely this detail would have been delegated to office help) and bear the signature of Cushing and the builder, Mordecai Lincoln Wallis. Throughout both documents, the procedures and conditions laid down and the provisions for the contingencies indicate that the architect involved is a man of marked professional experience, skilled in the use of technical procedure, progressive in the methods employed, meticulous in devising means of protecting the financial interests of his client, and zealous in assuring high performance of workmanship throughout. These are indeed a far cry from the specifications of a "country builder." They bear the mark of an able and forward-looking architect, well-versed in the handling of important commissions for exacting clients. The tone is that of a man of "large affairs."

Aside from the foregoing facts, the biographical details of Benjamin's life are few, yet because of the dearth of knowledge, my findings may assume an added importance. My information stems from church records and vital statistics in Connecticut and Massachusetts and from public records in the office of the Town Clerk of Hartland, Connecticut.[8] In brief, these are the essential facts known to date:

No record of Asher Benjamin's birth or birthplace has yet come to light.[9] However, the findings here presented indicate that Asher Benjamin was the son of Asher and Elizabeth, grandson of Samuel and Martha, all of Hartland, Connecticut.[10] It seems reasonable to conclude that he, too, was born in Hartland. I advance the date of 1773, since he was four years of age when his father died in Hartland on

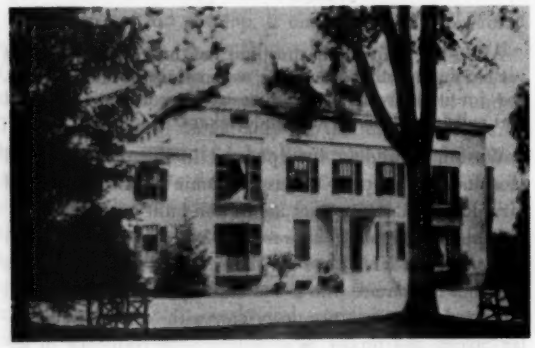

Fig. 2. "Belmont." The west front. (The Boston Athenaeum)

January 2, 1777, at the age of 25, leaving his mother, Elizabeth, with three children and "six pounds."[11] A little over a year later Benjamin's mother married Elishama Porter.[12]

As to the youth and early training of Asher Benjamin, the riddle is not yet solved. However, according to his own later statements, at the age of 22 he "made the drawings and superintended the erection of a circular stair-case in the State House at Hartford, Connecticut"[13] which he says was invented by Peter Nicholson of England in 1792, and which he further states he believed to be the first circular rail ever made in New England. That was in 1795. He must have completed his apprenticeship the previous year, since in 1811 he speaks of, "the seventeen years since I have been a practicing builder and architect."[14] We do not know with whom or where this apprenticeship occurred. Suffield? Remembering his remark in his letter to Gideon Granger ("I have, since I left Suffield") and knowing that Granger was a Suffield man, later of Hartford, it seems likely that

the boy Benjamin at perhaps seventeen years of age was apprenticed to a joiner of either Suffield or Hartford and that he thus came to Granger's attention. He tells us that in 1795 he was working on the State House in Hartford designed by Charles Bulfinch. It is obvious that he was strongly influenced by Bulfinch, but there is no proof that Bulfinch ever went to Hartford to supervise the use of his plans. We do know that Benjamin's designs depend in some appreciable measure on English pattern books such as those of the Peter Nicholson (1754–1844)[15] whom Benjamin quotes as the inventor of the circular staircase used in the State House.

On November 30, 1797, Benjamin married his first wife, Achsah Hitchcock of Brookfield,[16] a member of a family of prominence in that town. Her father, Moses, was a man of wealth and her uncle, the Reverend Enos Hitchcock, a chaplain in the Revolutionary Army, is said to have witnessed the surrender of Burgoyne and appears prominently in Trumbull's important painting recording that event.

According to family records, Achsah Hitchcock Benjamin bore four children before her death in Boston on January 30, 1805:[17] William Henry, Elizabeth, George August and Charles Edwin.

On July 24,1805, Asher Benjamin married Nancy Bryant of Springfield.[18] They had four Children: Mary Asher, John Bryant, James and Sarah Smith.

In 1845, six years after publishing the first edition of his last book, *The Builder's Guide* (Boston, 1839) Asher Benjamin died at the age of 72. The specific circumstances in which he left his family indicate that he was a man of substance.

In his *Writings On Early American Architecture*, Frank J. Roos, Jr., quotes Benjamin: ". . . the most exquisite ornaments lose all their value if they load, alter or confuse the form they are designed to enrich or adorn." Adds Mr. Roos: "This is no contemporary of ours talking. It is Asher Benjamin in 1814 in his *Rudiments of Architecture*."[19] "Benjamin," Roos states, "was not only a functionalist of sorts but he was also expressing an originality that would more readily be accepted in this country than abroad in his own day. Perhaps we can call it part of the American Idea."

Asher Benjamin's story is indeed an American story. We do not know that he ever visited either England or the Continent. We do know that he kept closely in touch with the main currents of architectural development in England.

1. Abbott Lowell Cummings, *An Investigation of the Sources, Stylistic Evolution and Influence of Asher Benjamin's Builders' Guides*, Unpublished Master's thesis, Ohio State University, Columbus, Ohio, 1950.

2. Talbot Faulkner Hamlin, *Greek Revival Architecture*, New York, 1944, p. 94.

3. J. Frederick Kelly, *Early Connecticut Meeting-Houses*, New York, 1948, II, 12–13.

4. L. F. Burbank, *History of the First Unitarian Society, Dunstable, N. H.*

(Reference courtesy of Miss Abbie Laton, Nashua, N. H.) Miss Laton has searched the Unitarian Church records and finds Benjamin a pew owner; signed as a member September 11, 1826; chairman of a committee to select a location for the new church building.

Baldwin Papers, Harvard University Graduate School of Business Administration Library (Reference courtesy of Miss Louise Hall, Duke University), Letter from A. Benjamin to James F. Baldwin, Dunstable, N. H., 17 Ap. 1825 (ALS). A. B. needs the plans in order to proceed with canal lock; intends to visit Boston later in the week.

5. Everard Miller Upjohn, *Richard Upjohn, Architect and Churchman*, New York, 1939, p. 157.

6. *New England Historical Genealogical Register*, XVI, 293.

7. In the possession of Miss Susan Williams, Boston, Mass., heir to Cushing's building contractor, Mordecai Lincoln Wallis (1729–1857), master builder of Boston. Wallis is credited with the building of First Trinity Church, Summer Street, Boston; Fort Warren, Boston Harbor, and the old Dry Dock, Boston, among other works.

8. *Town Meetings Secretary Book* (1761–1833). March 1, 1775, "Voted to chuse a chorister to set the psalm in Mr. Asher Benjamin's absents. Voted that Phineas Kingsberry Jun should set or tune (?) the Psalm when Benjamin is not at the meeting." December 1775, Asher Benjamin took oath as tithing man. 1774 Grand levy, town of Hartland, Samuel Benjamin 68P/10 (£68/10). 1775 Grand levy, Asher Benjamin 23P/6 (£23/6). 1776, Asher Benjamin voted a lister. 1777 Grand levy for West Mountain of Hartland, Elizabeth Benjamin 6 Pounds.

Gravestones: Hartland, Connecticut, first section west of gate, Asher Benjamin, Jan. 2, 1777, age 25.

9. Correspondence by the author 1931–53 with descendants of Asher Benjamin reveals no birth record and a belief within the family that he was born in Massachusetts.

10. W. C. Fowler, *History of Durham, Connecticut*, Hartford, 1864, p. 294, "Sam'l Benjamin & his wife owned ye covenent and Asher the son was baptized Feb. 16, 1752."

Granville, Massachusetts, Vital Records. Births, p. 22, "Asher Benjamin, s. Sam'l & Martha b. May 4, 1751."

11. Cf. note 8 *supra*.

12. *Early Connecticut Marriages*, New Haven, 1902, p. 78, "Elizabeth Benjamin & Elishama Porter, Hartland, Conn., May 28, 1778."

13. Asher Benjamin, *Practice of Architecture*, Boston, 1833, p. 40.

14. Asher Benjamin, *American Builder's Companion*, Charlestown, Mass., 1811, p. iv.

15. *Dictionary of National Biography*, XIV, 468–470.

16. *Brookfield, Massachusetts, Vital Records*, Worcester, 1909, pp. 271, 343.

17. *New England Palladium*, Friday, February 1, 1805 (New-York Historical Society).

18. *Springfield First Church Records*, Springfield, Massachusetts (Long Island Historical Society).

19. Frank J. Roos, Jr., *Writings on Early American Architecture*, Columbus, Ohio, 1943, pp. 18–19.

PUGIN: PRINCIPLES OF DESIGN *versus* REVIVALISM

PHOEBE B. STANTON

IT IS OFTEN held that the Gothic Revival in England confused architecture with ethics and religious revivalism, that it was a spirited movement which produced original personalities and disappointing buildings, and that these last were either dilute versions of the Picturesque Gothic or lean studies in the revival of a style which could not be revived. It is further believed that the Gothic Revival was based on the propositions that good, religious, Christian societies produce good art, that Christian art—the Gothic—was produced by a good society and was therefore better art than pagan classic and that it should for that reason be revived.

My study of Augustus Welby Northmore Pugin was begun with some such preconceptions in mind, but upon looking more closely at his buildings and those of his contemporaries I found that the architecture and work in the arts of decoration were singularly free from archeological pretensions and in them could be discovered the aesthetic doctrines of the revivalists freely and imaginatively applied, sometimes to the virtual exclusion of direct borrowing from the Gothic. This was not so true of the larger churches, for these the architects were inclined to turn into pompous accumulations of over-studied ornament, precisely because they were preoccupied with religious purpose. In the margins of their work, however, in their smaller churches, in their designs in the decorative arts, the Gothic Revivalists escaped from moral obligations to their mother style. By examining these works at first hand and refusing to accept the Gothic Revival's serious view of itself, one may formulate a new interpretation of the achievement and meaning of the movement.

The theory which I tentatively suggest here is that, under the leadership of A. W. N. Pugin between 1835 and 1852 the prime concern of Gothic Revival was not the revival of Gothic. It was rather the discovery of a definition of art and the establishment of rules, principles of design, which could be used to reform England's impoverished taste in architecture and the arts of decoration. Proof of the theory is finally to be found in the buildings and designs in decorative arts produced by the revival, for, though scholarly understanding of the Gothic underlies them, the architects used the style and their knowledge of it extemporaneously and with originality. They chose their details and their general conceptions with respect, not for Gothic authenticity, but for the materials, the site, the use to which the buildings were to be put.

This discussion is limited to the years between the competition for the new Houses of Parliament and the Great Exhibition. Eighteen thirty-five, the year of the competition, is our beginning because Barry's design was artistically successful because it was in a new Gothic Revival style. Eighteen fifty-one—the Great Exhibition—terminates the discussion, for Paxton's Crystal Palace marks the coming to recognition of a new kind of architecture. After 1851, the Revival split into two parts. Building passed into the hands of several gifted and many competent architects, Butterfield, Sedding, Bodley, Street, Scott—each of whom made the Gothic a vehicle for his own expression. Theory became the responsibility of Ruskin who changed the Revival from a reforming policy of a few doctrinaires into a diffuse structure in which every man could be his own authority.

Pugin's work is emphasized here because he was, of the architects of the Revival, the one who pulled the movement off its course toward academic revivalism and put it to use in the establishment of principles of design. He carried his brother enthusiasts with him for his personality was memorable, and he possessed literary gifts and rare power as a caricaturist.

First, a brief biographical summary is necessary of Pugin's dates and the manner of his influence: Born 1812; died 1852; artistic leader of a small but powerful group of Roman Catholic laymen who were influential in the Catholic Revival immediately before the conversion of Newman. Architect of about one hundred and fifty buildings, author of thirty books and tracts of which three are notable, *Contrasts* (editions of 1836 and 1841), *The True Principles of Pointed or Christian Architecture* (1841), *An Apology for the Revival of Christian Architecture in England* (1843). His first major work was his collaboration with Charles Barry on the design which won the commission for the new

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Houses of Parliament. He entered practice for himself in 1837. Between 1840 and 1844 he wrote all his major books, designed his best buildings and set up abiding relationships with the craftsmen and manufacturers who worked from his designs in the decorative arts. After 1844 his practice in architecture declined sharply and he turned his attention to the arts of decoration, to the interior decoration of the Houses of Parliament and to designs for china, tiles, stained glass, bookbindings, rugs, wallpapers, furniture, metal work for ecclesiastical and domestic purposes, and textiles.

It is, perhaps, as well to let Pugin introduce himself so that the reader may see the world through his lancet-shaped spectacles. In 1842 he visited Fleetwood which he described in these terms in a letter to the Earl of Shrewsbury.

I think Fleetwood is the most detestable place I ever was in. It is only four years old and it is half ruin already. Everybody sold up and bankrupt. It is the abomination of desolation, a Modern Greek Town. It is quite insupportable. I am sitting in a Grecian coffee room in the Grecian hotel with a Grecian Mahogany table close to a Grecian marble chimney piece, surmounted by a Grecian scroll pier glass and to increase my horror the waiter has brought in breakfast on a Grecian sort of tray with a pat of butter stamped with the infernal Greek scroll. Not a pointed arch within miles. Everything new and everything beastly.

Pugin's theories, as presented in his books, are composed of two parts, the purely aesthetic and the ethical and religious. He made a great point of his identification of Gothic excellence with Catholic supremacy, but he began his structure of theory with his aesthetic principles and to them he returned in the last years of his life. They are surprising when separated from his religious argument.

There should be no features about a building which are not necessary for convenience, construction or propriety.

All ornament should consist of enrichment of the essential construction of the building.

The smallest detail should have a meaning or serve a purpose.

The natural properties of the various materials should be turned to their full account . . . the architect should use their mechanism as a vehicle for his art.

The external and internal appearance of an edifice should be illustrative of and in accordance with the purpose for which it is destined.

Articles of utility should not be disguised but should be beautified in such a way that the real purpose for which the object is made is emphasized.

It is only when mechanical invention intrudes on the confines of art and tends to subvert the principles which it should advance that it becomes objectionable. We do not want to arrest the course of inventions but to confine these inventions to their legitimate uses and to prevent their substitution for nobler arts.

From a study of his letters, journals, drawings and buildings I have concluded that Pugin developed his principles in the following way: He was extraordinarily gifted visually and already in his youth the ugliness of sham architecture, fallacious design in the decorative arts appalled him. He found the Gothic was not sham. Reasoning from this discovery he studied mediaeval art to uncover where its beauty lay. The process of his reasoning can be found described in his argument in *The True Principles of Pointed or Christian Architecture*, and so can the rules which he felt should govern design if his analysis of Gothic was indeed correct. It should be noted in passing that Pugin was the son of a Frenchman, that he was bilingual, and that his father, A. C. Pugin, knew well and probably taught his son the theories of Marc-Antoine Laugier and Jacques-François Blondel.

With his principles in hand, two ways lay open to Pugin: To recommend that there be a new style created upon the theoretical foundation of his principles, such a style to be free to develop its own forms of ornament, its own methods of construction without direct reference to the Gothic. Or to recommend that the Gothic, for its glories, be revived because in it the principles were realized. Pugin sought to take the way of revival for he had in the course of his research become addicted to his own erudition and to the beauty of Gothic art, and also his attachment to Gothic made it impossible for him to accept the principles without the resources of the Gothic style to draw upon, for by themselves the principles were too cold, too bald. He had discovered them but he could not assume the responsibility of giving them the ornament which would satisfy fully his visual demands. He solved his artistic problem by means of his religious enthusiasm, for he justified revival of Gothic by declaring that a good society is one in which art follows the principles. The Catholic society of the Middle Ages produced the Gothic, he reasoned, and England's return to Rome would be hastened by the revival of her ancient art, and her taste considerably improved.

Pugin's argument is never clear when he approaches the moment of recommending revivalism. He veers and places his emphasis upon the ethical and religious question. The principles had, in other words, assumed a life of their own. Pushed to a final declaration he was not prepared to say that the Gothic as such should be revived.

We do not wish to produce mere servile imitators of former excellence of any kind, but men embued with the consistent spirit of the ancient architects, who would work on their principles and carry them out as the old men would have done, had they been placed in similar circumstance and with similar wants to ourselves.

His books are tracts aimed at the bad building, the inconsistency of design which filled the void as classicism was pushed beyond good taste by speculative builders and the uncontrolled extravagances of design produced by manufacturers of machine-made articles in the decorative arts.

By the end of his life Pugin realized the full import of his doctrine, for he was no longer pleased with what he himself had produced. He was not satisfied with his own Gothic. In 1851 he wrote to a friend:

My writings more than what I have been able to do have revolutionized the taste of England. My cause as an architect is run out . . . I am really ashamed of our things. They are good when compared with the Beasts, the Brutes, who belong to this age. But by the true standard they make me ill.

The Gothic Revival is remembered for its connections with religious revivalism, for its concern with ecclesiastical accuracy, for its suggestions that life in the Middle Ages was better than life in the nineteenth century. In point of fact the implied social and political meaning of Pugin's famous plates from *Contrasts* (1841) has been greatly exaggerated. The aesthetic principles formulated by the Revival have been so little noticed that their relationship to theories of design being developed outside the Revival has not yet been described.

Pugin's work illustrates the quality of his artistic capacities and the subtle adjustment which he made between his principles, his affection for Gothic and his great personal gifts. In it may be found both evidence of knowledge of Gothic which went beyond pedantry and pronounced tastes which make his buildings immediately identifiable as Victorian rather than mediaeval. Beneath the Gothic surface he worked carefully within his principles at the creation of a characteristic Gothic Revival style which was more expressive of Victorian taste than it was of Gothic.

I have already mentioned the Houses of Parliament competition design as Pugin's first major work. The Committee that decided that the new Houses should be in the Gothic or Elizabethan style explained its choice in these terms:

The peculiar charm of Gothic architecture is in its associations; these are delightful because they are historical, patriotic, local and intimately blended with early reminiscences.

C. R. Cockerall, as might have been expected, said that the only recommendation for the Gothic was as a reminder of "our aristocratical past." Both were right. The choice of the style belongs to the picturesque taste for the Gothic. The design which was chosen did not. The judges, when awarding Charles Barry the coveted commission, gave little consideration to practicality, functional efficiency or probable cost. What appealed to them was the quality which was indeed the great strength of the design, its visual unity. It was a massive composition of boldly expressed, huge units over which was hung a lacework of unifying ornament, kept small in detail but in high relief, designed to enhance the scale of the building by repetition emphasized by shadow.

There was about the competition design produced by Barry and Pugin none of the leanness of the Gothic of Fonthill Abbey. The ornament was lavishly used to assist in the architectural expression of the whole, a product of Pugin's research into Gothic and Barry's ability to qualify and manage Pugin's exuberant enthusiasm. In the Revival buildings before 1835 ornament was applied sparingly, usually high on the building, often around doors and windows, rarely over a whole wall surface. It was never used in relief so high as to cast shadow, for beyond suggesting pleasurable association with "our aristocratical past" it had no function and it was expensive.

Sir Kenneth Clark calls the Houses of Parliament "a necropolis of style," which I suppose it is if one considers it detail by detail, but his phrase omits any description of the organization to which the details were submitted and the effect which their repetition achieved. The Houses of Parliament are not Gothic revived nor are they classical surfaced with Gothic ornament. There are suggestions of the horizontal emphasis, the feeling of a building which wears its interior on its exterior, the square-end features of Jacobean houses. The national and patriotic reason for the choice of the style cannot have been strong, however, for Charles Barry told a Select Committee that the town halls of the Low Countries had inspired the design, a sensible choice because the town hails were urban structures meant to be seen broadside.

Notable in the Houses of Parliament is the degree to which archeological revivalism was not enforced, the extent to which its architects exercised originality in the choice of the inspiration and their use of it, and the successful way in which they managed the adjustment of building to site, to political significance and to its practical usefulness as a meeting place or Parliament. There was no precedent in the early Gothic Revival for this degree of architectural proficiency or erudite boldness.

In the Houses of Parliament Barry was responsible for the general conception of the plan and the elevations. He also remained in continuous contact with the building as it passed through revisions in the course of construction. Pugin designed the west front and the whole of the decorative detail. Neither man could have done without the other.

The design for the Houses of Parliament would be without significance other than as a successful product of an imaginative collaboration between two gifted men had Pugin not gone on to develop the ideas which underlay its design. He did not copy its style. The following examples of Pugin's work which illustrate this development are drawn from his productive years, 1840–1844, also the period of his definitive writing. Pugin's churches have been criticized as over ornate, flimsy, a judgement based upon examination of his London and Birmingham cathedrals. The Cathedral at Nottingham is neither flimsy nor ornate nor is the small church of St. Mary, Brewood, Staffordshire (Fig. 1). The influence of Pugin's admiration for the Norfolk parish churches is apparent in the simplicity of the

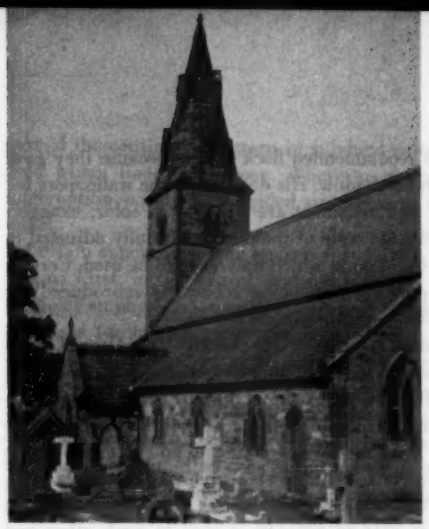


FIG. 1. St. Mary's, Brewood, Staffordshire. Exterior. (Marcus Whiffen)

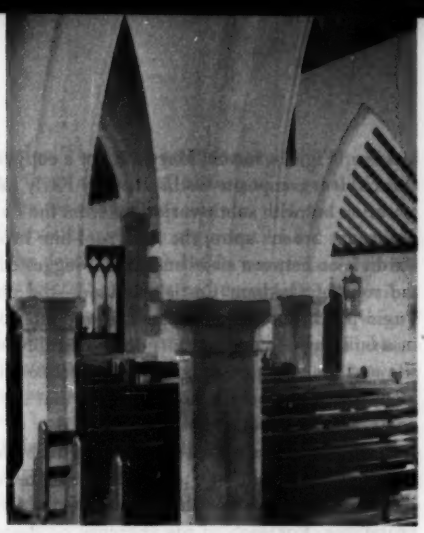


FIG. 2. St. Mary's, Brewood, Staffordshire. Interior. (Marcus Whiffen)

FIG. 3. St. Mary's, Brewood, Staffordshire. Rectory. (Marcus Whiffen)

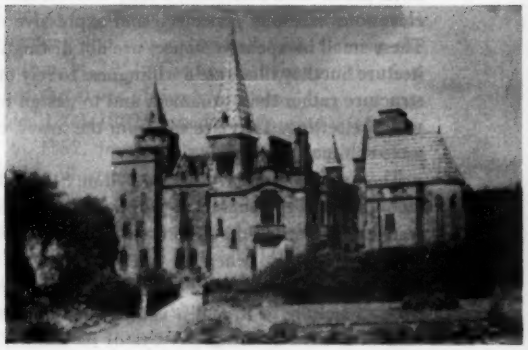


FIG. 4. Alton Castle, Staffordshire. Exterior. (Marcus Whiffen)

FIG. 5. St. Giles', Cheadle, Staffordshire. West doors. (Marcus Whiffen)

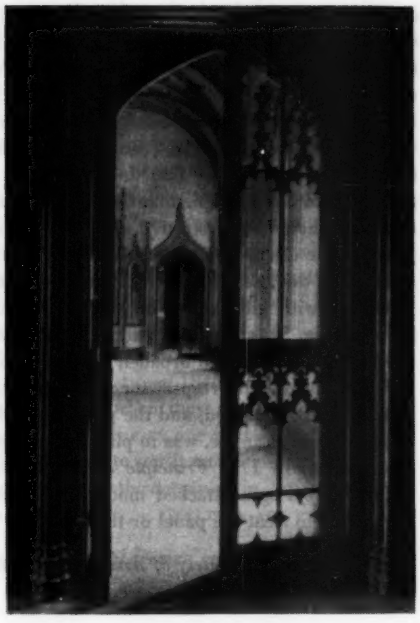


FIG. 6. Alton Towers, Staffordshire. Interior. (Marcus Whiffen)

interior (Fig. 2), but St. Mary's is not a copy of a Norfolk church. It is composite Gothic, largely Early English in inspiration but with subtle variations from the Early English. The squat broach spire, the long roof-line broken only at the division between aisles and nave—suggested perhaps by the roof of Oakham Castle, Rutland—the characteristic Pugin porch, the understatement of the interior, all result in a building of good proportions admirably suited to the site and the village setting. The indebtedness to Gothic is identifiable but there is no possibility that the building is anything but Victorian.

Pugin was perhaps most successful in the buildings which he designed for domestic purposes, for in them he was not required to work other than most generally from Gothic prototypes. For each of his churches he designed a residence and that at Brewood (Fig. 3) is typical. It is village architecture, simple to the point of barrenness, forthright in its use of local materials, totally without decoration, the elevations carefully conceived and expressive of the plan. These small inexpensive houses are not distinguished architecture but they illustrate a willingness to rely on expressed structure rather than ornament and to design in sympathy with the setting. They are far from the heavy villas which were common in Pugin's time.

The Castle and the Hospital at Alton, Staffordshire, were commissioned by the Earl of Shrewsbury and though funds were not unlimited they represent the kind of work which Pugin chose to do when he was supported by a generous and sympathetic patron. The Hospital is best known from Pugin's etching of it, and it is therefore surprising to find how little his rendering conveys of its solidity, simplicity or the subtle adjustment of the building to the singularly beautiful site.

The Castle (Fig. 4) is less a castle than a large house, set upon, and its foundations sunk into, a great stone outcropping which crowns the hill. The plan is irregular to take advantage of the view across the valley. There are reminders of French architecture in its design and the site which Pugin chose shows the influence of a Rhine journey which he had enjoyed. The Castle survives these reminiscent qualities. It may be that its weakness is a too strict adherence to the principle that the external appearance of an edifice should be illustrative and in accordance with the plan and the use to which the structure is to be put.

The west door of the church of St. Giles', Cheadle, Staffordshire, with gilt talbots on a brilliant but dark red ground (Fig. 5), shows the tendency which is marked in all of Pugin's designs to broaden and flatten and simplify patterns, always with respect for the surface to which the pattern is to be applied, and the part which the textile or wallpaper, for example, was to play in a whole decorative composition. In *True Principle of Pointed or Christian Architecture* Pugin attacked modern wallpapers because they failed to treat the panel or the wall in a "consistent" manner. He recommended flock papers because they gave pattern without shadow. His designs for the wallpapers for the Houses of Parliament are brilliant in color, exaggeratedly simple, the scale of the design carefully adjusted to the size of the room in which they were to be used. Certain of these papers are now being accurately reproduced for the renewed decoration of the Houses.

When Pugin received responsibility for Alton Towers it was a sprawling house, floridly decorated in the height of the provincial Gothic taste of the early years of the nineteenth century. His efforts there are marked by attempts to subtract from the ornament and to add elements which would unify the enfilade of state rooms. Among his additions were the oak and glass doors (Fig. 6), for by using glass he was able to open the rooms to each other and so to qualify the claustrophobic density of the decoration.

After 1844 Pugin spent his energies upon the completion of the interior decoration for the Houses of Parliament and the design of good-looking objects which could be produced in large quantities at moderate prices. Scarcely a Catholic church in England is without some piece of church furniture or metal work designed by Pugin or produced posthumously from his designs. These rugs, candelabra, tables, chairs, vestments were consciously designed to be reproduced in quantity. To John Crace, who manufactured his furniture, Pugin wrote in 1849 of his hopes for the success of their collaboration:

> I am so anxious to introduce a sensible style of furniture of good oak and constructively put together that shall compete with the vile trash made and sold. These things are very simple and I am certain with a little patience can be made to pay.

The heavily carved extravagance of the demonstration pieces which Pugin displayed at the Great Exhibition is better known than the anonymous examples of his personal attempt to introduce reforms in design which William Morris was later to advocate. It is significant that, unlike Morris, Pugin nowhere suggests that mediaeval methods of production be revived.

Barry and Pugin passed every detail of the decorations of the Houses of Parliament through repeated revision and alteration. The result which they achieved demonstrates the composition and taste in interior decoration which was gradually being worked out beneath the veneer of Gothic ornament. The interior space of the rooms was not violated; the form of all the rooms—the walls—was stringently maintained and underscored. When a major or minor ornamental detail projected into a room or divided two rooms it was kept delicate, even lacy. In all ornamentation applied to the walls the scale was kept small and effect was obtained by repetition and the reinforcement of the wall as surface and spatial boundary. The stained glass was regarded as a continuation of the wall decoration and made to form a

part of the continuous pattern in subdued color and dark gold which lined the rooms. Wherever a projection or interruption occurs it is gilded or executed in polished metal.

Certain conclusions may be drawn from this scrutiny of Pugin: First, in his writing and his building, in spite of his noisy emphasis upon religious revivalism his main concern was for his aesthetic principles. Between 1840 and 1844 he passed through a process of reasoning similar to that described by Viollet-le-Duc in the *Dictionary* of 1854 and the *Lectures* of 1863. Pugin was neither as rational nor as explicitly exact as Viollet-le-Duc for it was not in his nature to be so and he was preoccupied with his share in the growing confusion of ethics and aesthetics.

Fortunately his buildings provide the evidence to bridge the gap between his aesthetic theory and his practice of modified revivalism. His rigid adherence to his principles gives them strength, coherence, and the singular originality they possess. It is finally the principles which control his errant Gothic enthusiasm and his scholarly and religious propensities.

His theory was astringent, emphasizing construction, equating ornament with it, and it was styleless and without ornament. Pugin and his contemporaries could not do without a style and ornament; they could not follow the theory of the principles to their logical conclusion as did Viollet-le-Duc. Comforted by religious revivalism which sanctioned the use of Gothic they produced a style of sorts of their own. Its products are sometimes uninspired but hardly ever ugly, and some of their work, the Houses of Parliament, for example, is as dramatically successful as any work of the nineteenth century. Pugin's work, revisited, is surprising for he has for so long been considered an architect who wrote better than he built.

Pugin drew a large part of the English Gothic Revival with him and gingerly made his way along the argument which was the foundation of modern theories of art in architecture and the decorative arts. That he was assisted in this process by his religious conviction serves only to link him with yet another of the major philosophical currents of his time.

Second, Pugin's taste and theories foretell the coming of Pre-Raphaelitism and the Arts and Crafts Movement. Pugin knew and admired Overbeck and he drew constantly upon the resources of German painting and German theory. In 1843 he summed up his assault upon classical figure painting in this fashion:

> We do not want to revive a facsimile of the works of any style of any particular individual or even period, but it is the devotion, majesty, and repose of Christian art for which we are contending. It is not a style but a principle.

Here again all Pugin was left with was a principle, which did not indicate the form in which the principle is to be embodied if revivalism is not employed. His principles lack a third dimension. They were an attempt to solve a problem by reasoning from a study of history to a general truth which must then be clothed in some sort of form.

William Morris carried the argument of the revivalists well beyond the depth to which Pugin was prepared to follow it. Return to craft methods had occurred to Pugin but he had not recommended it. Morris secularized the theory of the Gothic Revival, substituting for religious revivalism the re-establishment of the mediaeval relationship between the craftsman and his craft.

Third, and last, there exist connections between the Revival and the movement which S. Giedion has called "the search for basic principles of design." Giedion argues that in England between 1845 and 1860 a small group of men sought to discover the principles which should be the basis of a reform in taste, that they were men of influence, that their theories were sound but that they failed because they had "an inability to proffer a new artistic vision." To these men, Henry Cole, Owen Jones, Richard Redgrave, and Gottfried Semper, who was associated with Cole at the Great Exhibition in 1851, Giedion attributes "the first protest against the abuse of mechanization."

Henry Cole, 1808–1882, edited the *Journal of Design* from 1849 to 1852, founded Summerly's Art Manufacturers in 1847 to illustrate the union of art with manufacture. He was a powerful member of the executive committee for the Great Exhibition. Owen Jones was a gifted designer, Superintendent of the Works of the Exhibition, advocate of formal as opposed to naturalistic ornament. Richard Redgrave was Surveyor of the Queen's Pictures. These men did not want to revive any style; their aim was, instead, to correct the abuses prevalent in design and to do this they emphasized utility. Gottfried Semper's definition of art, written after his association with Cole and his circle in England, best describes the attitude of the group. Art was the result of craft, the ultimate product of decorative forms which are produced by a combination of materials, the methods used in treating them and the practical purpose for which the object was intended. This doctrine is not far from Pugin's principles published six years before Cole founded his journal. I do not wish to say that Pugin had any direct influence upon Cole, though they were well acquainted and Cole respected Pugin. I feel, however, that the Gothic Revival despite its revivalism was early a participating part of the attempt to create an art which would relieve the situation which Cole described when he said "man has become the servant of the machine."

The journalism of architecture and the theories of taste and design in England between 1840 and 1851 have never been described. If and when they are I believe that the Gothic Revival will appear as one part of the search for principles of design, or, to put it another way, one part of the search for a nineteenth-century style.

WALTERS ART GALLERY

AMERICAN NOTES

CHARLES E. PETERSON, *Editor*

421 Walnut Street, Philadelphia 6.

CHANGE OF ADDRESS, 1954

In June the National Park Service opened two new offices —the eastern and western offices of the Design and Construction Division—in Philadelphia and San Francisco, respectively. Into these two offices, which are branches of the Washington office, most of the architects, engineers and landscape architects of the Service have been transferred. Your editor is now at the Walnut Street address with the title of "Supervising Architect, Historic Structures." He will be concerned with the study, restoration and maintenance of early structures owned by the nation and administered by the National Park Service. The vast majority of these are in the east.

At the new address we continue to solicit contributions to knowledge for "American Notes." We have been grateful for them in the past, even though we have been unable to answer adequately the flood of letters which now comes in.

PREFABS FOR JAMAICA, 1755

Colonial Philadelphia was a great supplier to the West Indies, especially of wheat, flour and lumber. The following letter from Charles Norris, a prominent Quaker, to one Cadwalader Evans is the earliest mention we have seen for prefabricated houses made here. We know that ready-made houses were common at the time of the California Gold Rush, but we'd like to know of more eighteenth-century examples.

Philad[a], December 26, 1755

Respected Friend

The bearer, Amos Jones, is going to Jamaica to put up some Frames of Houses made here, particularly one large house which is for one Cap[t]. M. Gee at the North side of the Island. Any further Intentions Amos can himself Inform thee of But so farr I understand that in Case he can keep his health & find Employ He does Intend to Stay there some time & I think him a Compleat Carpenter in any work he undertakes & an honest young fellow. Therefore [I] Recommend him to thy Notice, for any Recommendations that may be usefull to him in Jamaica, Believing he will Answer the Character given him & not doubting he will be gratefull enough properly to acknowledge the Obligation laid on himself & thy Sincere &c &c Friend.

CN [Charles Norris]

To Cad[w] Evans

(Historical Society of Pennsylvania, *Norris Manuscripts, Family Accounts, 1740–1773*, I, 15.)

RICHARD HILLS, 1767–1831

We seem to know hardly anyone on the ground who is working in Massachusetts architectural history. Several friends have been unable to answer our appeal for more information about Richard Hill, born in England and flourishing around Boston for thirty years. The following notes were transcribed for us by Hubertis Cummings of Harrisburg, Pennsylvania, from a genealogical work entitled, *The Hills Family in America* by William S. and Thomas Hills (New York, 1906, pp. 534–35).

4015. Richard[4] (John[3], Joseph[2], Robert[1]), b. Ashford, Co. Kent, England, Aug. 11, 1767; d. Boston, Mass., Aug. 12, 1831. Married, Boston, Jan. 15, 1818, Ann Wagstaff, b. Alfredton, Derbyshire, England, d. Roxbury, Mass. (a part of Boston, since 1868), Oct. 1845. Richard Hills was an architect and builder. He served a seven years' apprenticeship to a carpenter in Ashford or its vicinity. With very limited opportunities he developed considerable skill as a designer and housewright. In 1801, with his younger brother William, he joined their brother Stephen in Boston, where he had been a resident some six or seven years. In 1802, Stephen left Boston and the elder of the remaining brothers succeeded to his business. Early in 1803, his father's widow and brother George arrived in Boston and their mother again became homekeeper for her sons. There is a tradition in the family that Richard Hills built at Waltham one of the earliest if not the first cotton mill in Massachusetts. It is certain that in 1823 and 1824, he resided in Chelmsford; while in the neighboring town of Lowell, he built the Boott and other mills and St. Ann's Church, the Hinckley and Gardner estate on the corner of Beacon and Somerset streets, which in 1873 was fitted for business and known as the Congregational House, which was demolished in Dec., 1904, the Boott Mansion in Bowdoin Square, now a part of the Revere House; the William Pratt homestead at the corner of Summer and Hawley Streets; that of John D. Williams on the site now covered by the Cathedral of the Holy Cross; the huge structure long known as "Harris' Folly" and the Amory estate, at one time the home of Gov. Gore and later of the author, George Ticknor, which was the residence of Lafayette during his stay in Boston and which still stands but little altered at the corner of Beacon and Park streets, were among the most notable evidences of his skill. The compiler has heard from some of his relatives that Mr. Hinckley, was so well pleased with his house and its cost, that he gave the estate upon which the architect and builder resided to the lady to whom he was engaged to be married. Whether the conveyance was a gift or partial payment may be doubted, but the registry record is clear that on the 28th of March, 1816, David Hinckley conveyed the estate at the corner of Pleasant and South Cedar (now Winchester) streets, "to Miss Ann Wagstaff, of Boston, spinster." Richard and Ann (Wagstaff) Hills had no children.

This provokes a question. If Richard Hills designed Governor Gore's town house in Boston and an early cotton mill at Waltham, did he also design the Governor's well-known and elegant country house at the latter place? According to Fiske Kimball, *Domestic Architecture* (New York, 1922, p. 298) the present mansion was built between the burning of its predecessor in 1799 and the return of the Gores from England in 1804. Was Hills sent over by the Gores for that very purpose?

TOWN'S NEW HAVEN VILLA, 1836–37

Allen Brooks of Yale sent us a carefully worked-out paper from which we have abstracted the following paragraphs.

THE HOME OF ITHIEL TOWN, ITS DATE OF CONSTRUCTION AND ORIGINAL APPEARANCE

by H. Allen Brooks, Jr.

The house an architect builds for himself is one of his most significant designs. He is free to express his taste unhampered by the desires of a client or a conservative committee. Ithiel Town (1784–1844) was nationally known as the architect of four state capitols, government buildings, churches and residences as well as the engineer-designer of the Town Truss. In New Haven, Connecticut, Town constructed his Greek Revival home. Its library contained the largest collection of art books in America. In 1859–60 the house and library were engulfed by Henry Austin's design for an Italian Villa of several times the size. Today the remains await demolition in face of Yale University's expansion program.

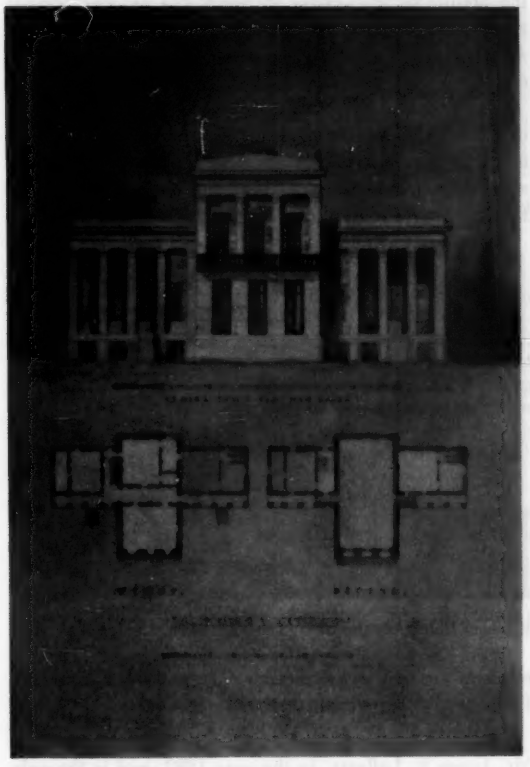
From our deductions and the known facts we may infer that on October 7, 1835 Ithiel Town bought land at Hillhouse Avenue and Grove Street on which he started to build his house. By October 1, 1836 (assessment date for the year 1836) the house was less than half finished and was assessed, with the property, for $5,000. Before the following October first (1837) the house was completed and with the additional land purchase of $2,250 on October 18, 1836 was appraised and entered on the 1837 tax books for $10,000. The valuation was unchanged in 1838 and in 1839. It was for 1839 that the Lists of Taxable Estate exist and verify the $10,000 as being Ithiel Town's home on Hillhouse Avenue. Based on this information it would seem correct to state that Ithiel Town's home in New Haven was built in 1836–37.

The only known literary reference appeared in *The Ladies' Companion* in 1839 (Vol. X, p. 123). The author, Mrs. Lydia H. Sigourney, "the sweet singer of Hartford," was considered America's leading poetess for half a century. Three and one half pages of the four-page article are devoted to transcripts of Ithiel Town's writings but the one-column description is invaluable. Statements referring to the house are quoted here:

> In the second story, is a spacious apartment, forty-five feet in length, twenty-three in breadth, and twenty-one in height, with two sky lights, six feet square,—three windows at one end, and three sash-doors, opening upon the balcony. There, and in the lobbies, and study, are arranged, in Egyptian, Grecian and Gothic Cases, of fine symmetry, between nine and ten thousand volumes.
>
> Every partition in his building, even to those in the closets, are of brick; all the inside plaistering is upon bricks, without laths, except the ceiling, and all the floors are of mortar, two inches in thickness, with a coat of watercement, and the rooms without woodcases.

The first paragraph corresponds closely with a sketch of the library preserved in the A. J. Davis Collection at the Metropolitan Museum of Art. The building's present condition prevents careful comparison with Lydia Sigourney's description of the construction.

Examination of the house as presently existing discloses little of the original workmanship. Foundations and walls



The home of Ithiel Town. Pencil and ink line drawing tinted with watercolors. Unsigned. (A. J. Davis Coll., Metropolitan Museum of Art)

of much of Town's house seem to remain in place, but final judgement must await demolition.

A date of 1836–37 certainly places this house well beyond a time when it could have been significant in the development of the Greek Revival, which itself was already being supplanted by the more picturesque Gothic Revival. However, as the home of a renowned architect, the building still demands the careful attention of the architectural historian. The handling of the Greek decorative and structural forms as well as use of materials, is typical of the work of Town's firm, especially as seen in monumental buildings—it is very square, linear, and exceptionally clean. Neither the basic massing of a deep, higher central block with lower wings, nor the cross axis circulation are

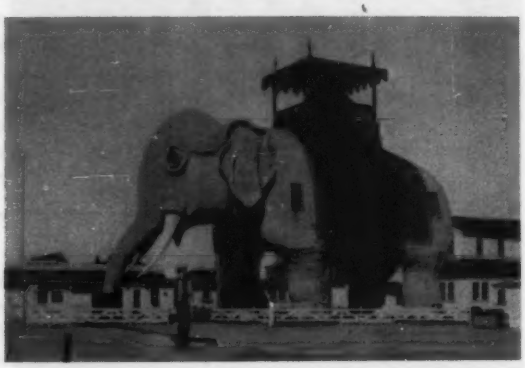
innovations, as can be seen from the frontispiece of Minard Lafever's *Modern Builders' Guide* of 1833. Certainly the most outstanding feature of the building was its large, fireproof, skylight lit, second-floor library.

YALE UNIVERSITY

LAFFERTY'S ELEPHANT, BUILT 1882

In our last issue we published the patent drawings for the architectural elephant at Margate City and advised readers to visit same. We then took our own advice and one August noon we paid our 15¢ and climbed through the creature.

Facing east on the beach, it has entertained generations of Americans, as witness the names inscribed inside (the oldest carved by jackknives, the newest written with lipstick). Though a little rusty here and there, it looks good for many more years. According to a leaflet given out, the



Elephant Hotel, Atlantic City. (Thos. A. Dexter. Kardmasters pub.)

elephant was built as a real-estate office and cost $38,000.00. Following is the official statement:

The Elephant at Margate City was built by the inventor, Mr. James V. Lafferty, in the year 1882, and is the only building in the world built on this novel plan, and its resemblance to those living monsters is worthy of more than passing notice, having already attracted the attention, examination and favorable comment of intelligent and traveled visitors from this and foreign countries. The Elephant has been fitted out with studied effort to gratify a curious public, and is a bazaar of fitting mementos of this great pleasure resort. The view obtained from the Howdah, or observatory, is not excelled anywhere on the coast, being from an elevation of 65 feet, and commanding the sea and land for miles. The Thoroughfare, Atlantic City, Ocean City and Somers Point being in easy sight, affording a view of the pleasure-seekers in all their various sports, the beach drive, bathers, fishing parties, and, with the aid of a glass, Brigantine Shoals, one of the most dangerous points on the entire Atlantic Coast. The Monster Elephant stands in a feeding position. Access to the interior is gained by spiral stairways in the hind legs, one being for the entrance, the other exit. The stairs have an easy rise, there being in all about three hundred and fifty steps and risers. The entrance leads to the reception room, which is 18 x 18 feet, is neatly fitted up, like a house, with dining room, kitchen and four bedrooms in this wonderful beast.

¶ The Howdah is sixteen feet square and twenty feet high. The Elephant has 22 windows for the admission of light to a number of small rooms. Its decorations and substantial finish make it a complete pleasure resort, and a great curiosity. In the construction of this mechanical phenomenon there were used over a million pieces of timber, and 8,560 ribs or arches; also two hundred kegs of nails, and four tons of bolts and bars; it required 12,000 square feet of tin in covering it. The body is thirty-eight feet long and eighty feet in circumference; the head is twenty-six feet long and fifty-eight feet in circumference; the neck is six feet long and forty-eight feet in circumference; the legs are twenty-two feet long and ten feet in diameter; the ears are seventeen feet long and ten feet wide, and each weighing 2,000 pounds; the tail is twenty-six feet long; the trunk is thirty-six feet long; the tusks twenty-two feet long; the eyes are eighteen inches in diameter and are made of glass. These few measurements are given that an idea may be formed of its immense size, as the visitor gazes on it from a distance. It can be seen 5 to 8 miles without glasses. Such a curiosity is well worth your attention, and a thorough examination will amply repay you. Do not fail to come and see this wonderful Elephant and get a view from the observatory. Passenger steamships come in close to the Beach to view this unique landmark. Trolley cars direct to the Elephant, Margate City, N. J.

The purpose of building the Elephant was for a colossal real estate office and the cost of the building was $38,000.00. *It was one of the first structures in Margate and is now being used just for sightseeing.*

JOHN GERTZEN ESTATE, *Owners*

RESTORING WRIGHT BROTHERS' CAMP OF 1903

Last December 17 ceremonies were held among the Kill Devil Hill dunes of North Carolina in honor of the fiftieth anniversary of the first powered flight by Orville and Wilbur Wright. The site of this event lies within the area of the Wright Brothers National Memorial administered by the National Park Service.

As a part of the show, two of the original shacks used by the Wrights were restored in three weeks' time under the direction of NPS Architect L. B. Coryell of Richmond. A brief mimeographed report (4 pp., 9 illus.) was prepared by NPS Historian Frank Barnes after research among the Wrights' private papers in the Division of Aeronautics, Library of Congress.

We quote here the description from the Barnes' report and reproduce two photographs of the reconstructions:

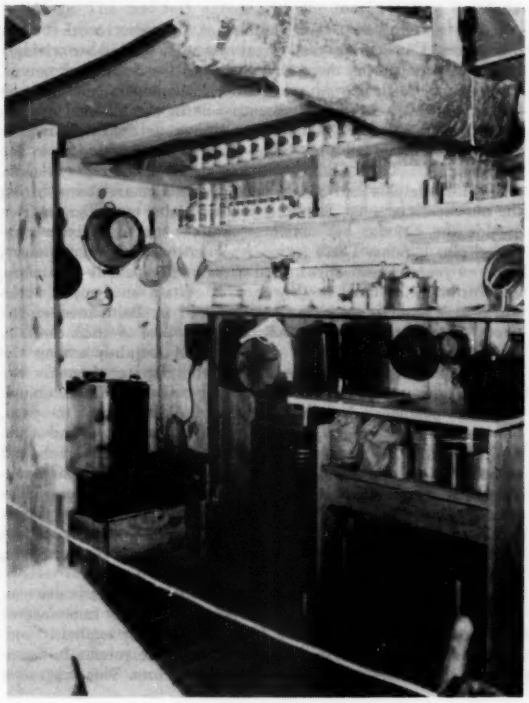
There were two low rough buildings of lob-lolly pine at the site of the first successful heavier-than-air flight. These were located almost directly north of Kill Devil Hill, 1,100 feet from its foot (at that time), and probably 60 to 75 feet east of the "first flight" track area. The longer sides of the buildings lay in a northeast-southwest direction.

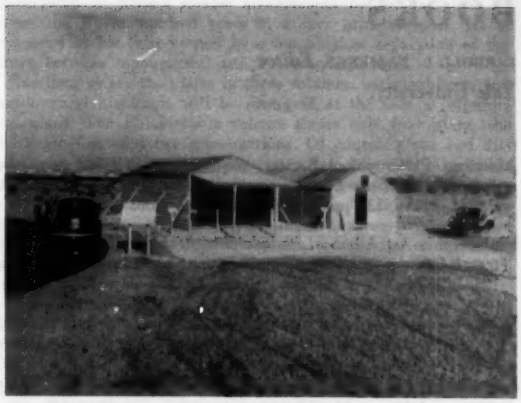
Nearest the first-flight strip was the "handcar" (the Wrights' name for it) or hangar, built just that fall. Forty-

four feet long, sixteen wide, and nine feet high at the eaves of its low-pitched roof, its simple frame of 2 x 4's was covered with clapboards, or siding; its roof-boards (running from ridge to eaves) were covered with tar-paper overlaid with battens at intervals. The interior was unfinished (framing uncovered), and windowless; along one side (or part of one side) there was a workbench. The rough flooring was extended into an exterior "walk" on at least the long sides of the building.

Perhaps ten feet east of the hangar was the building used as quarters (the "summer house", the Wrights called it). Originally 25 feet long, 16 feet wide, and seven feet at the eaves when erected two years before, this building had been added to in the previous year and was now 40 feet long. Its frame even simpler (horizontal plate and sill, and sparse vertical members) than that of the hangar, was covered merely with vertical boards and battens; the roofing was the same. On the unfinished inside, in the south end of the building, living quarters were arranged—kitchen, living-room, library. The living-room almost certainly occupied space in the southwest corner of the building; the kitchen was without a doubt in the southeast corner. Under the roof (perhaps over the kitchen—evidently right on the crossbeams, a "sleeping quarters" of two wooden beds (closed off with carpeting) was arranged; it was reached by a rough wooden ladder. A workshop (or storage space) was presumably fitted up in the north end of the building. A partition (with door) evidently separated living-space from working-space. Known windows were one of four panes near the southwest corner,

Wright Brothers National Memorial. Reconstructed kitchen.





Wright Brothers National Memorial. Reconstructed hangar and quarters.

on the long side, and one of six panes, in the southern gable end.

Both buildings were similar in the following respects: (1) both rested on foundations of wooden posts, (2) the ends of each were provided with "falling" doors extending the full with of each, hinged on the line of the eaves (the south door of the "quarters" was provided with a smaller two-part door for entrance when the larger door was closed, (3) the walls of each were braced on the exterior.

The aesthetic qualities exhibited by these structures are certainly negligible. Some may ask if it is architecture, but none can deny that it is history. As subjects for restoration they recall some western ghost towns—or Charles Stotz' reconstruction of the first oil derrick in western Pennsylvania.

SAH NEWS

THE AUGUST TOUR

The fourth annual Aug[illegible] trip of the Society was held in Salem, Marblehead, and Saugus, Massachusetts, on the weekend of August 21–22. Abbott Lowell Cummings and Daniel M. C. Hopping were jointly in charge. In addition to working out the enormously complicated problems of scheduling, victualling, taking reservations, and selecting the buildings to be visited, Messrs. Cummings and Hopping prepared and distributed a detailed and informative printed guide of the tour.

The group was entertained at a buffet dinner on Saturday evening at the home of Mrs. Francis B. Crowninshield and on Sunday evening were guests of Mr. and Mrs. Bertram K. Little.

Headquarters of the tour on the first day was the Essex Institute, Salem, and the Museum of the First Ironworks Association, Saugus, on the second. Some seventy-five members and friends of the Society registered for the trip.

BOOKS

CARROLL L. V. MEEKS, *Editor*
Yale University.

American Philosophical Society, *Historic Philadelphia from the Founding until the Early Nineteenth Century* (*Transactions, 43*, Part I, 1953), 331 pp., illus. $4.00 paper, $6.00 cloth.

Philadelphia Art Alliance, *Philadelphia Architecture in the Nineteenth Century* (Philadelphia: University of Pennsylvania Press, 1953), 36 pp., plates. $3.50.

Richard H. Howland and Eleanor P. Spencer, *The Architecture of Baltimore, A Pictorial History* (Baltimore: Johns Hopkins Press, 1953), 149 pp., illus. $7.50.

It is a happy coincidence that these three contributions to local architectural history should appear simultaneously for, taken together, they admirably depict the development of eighteenth- and nineteenth-century architecture in two major centers within the middle Atlantic states. Happily, too, since the three volumes approach their material from slightly divergent points of view, they also invite comment on the whole problem of local architectural history.

Appearing as part of the *Transactions* of the American Philosophical Society to celebrate the present replanning of the area around Independence Hall, *Historic Philadelphia* provides a series of 27 essays by two dozen authorities on the major buildings of old Philadelphia and the social milieu producing them. Among the most valuable features of this volume is a large, multicolored map of the Independence Hall area by Grant Miles Simon, folded into an envelope at the back. This exceptionally detailed map displays not only the sites of existing and demolished buildings of historical significance, but even the location of all extant eighteenth- and early nineteenth-century structures regardless of historical importance. The essayists thrust occasional salients into the nineteenth century in connection with the later histories of the buildings they discuss, while Robert C. Smith skims through the whole development of the city's architecture through 1900, but the nineteenth century is preëminently the province of the second Philadelphia volume compiled by a group of members of the Philadelphia Art Alliance. This is a handsome catalogue of 105 plates illustrating the "best examples" from an exhibition held in the spring of 1953. During the same year an exhibition of Baltimore architecture at the Peale Museum led to our third book, an equally handsome volume of 108 plates under the editorship of Wilbur Harvey Hunter, Jr., with an introduction by Richard H. Howland and Eleanor P. Spencer, covering both colonial and nineteenth-century architecture (through 1910).

In contrast to the short introductory texts of the latter two volumes which are designed to let the plates do most of the talking, the essays published by the American Philosophical Society possess an antiquarian and archaeological flavor. Hence, while each is a primary source of reference for the buildings it covers, the essays are of varying interest to the architectural historian. Most concentrate on the political, economic and social history surrounding the structures. Some, however, are specifically concerned with architectural problems. Among these, one by Edward M. Riley presents the most complete study of Independence Hall yet published, the minutiae of its elaborate documentation justified by the historical significance of the building. Charles E. Peterson contributes essays on Library Hall and Carpenter's Hall, the latter containing a wealth of information on the role of carpenters' companies in colonial America and of particular interest for two appendixes—one a documented chronology of the tantalizingly obscure life of Robert Smith, perhaps the most important designer in colonial Philadelphia; the second a reproduction of engravings from the rare first printing (1786) of the rule book of the Company. Agnes Addison Gilchrist adds to her earlier work on Strickland with detailed accounts of the Exchange and the High Street market sheds (structures which led to the rechristening of High as Market Street in 1858) in which she skillfully blends architectural and social history. Her study of the markets includes a convenient résumé of the early use of iron in American building, while adding new information to this story. Bray Hammond uses social history adroitly in his account of the relationship of the colorful career of Nicholas Biddle to the Second Bank of the United States. Robert Smith's lucid essay on two centuries of Philadelphia architecture concludes the list of those especially significant for the architectural historian, who will also find helpful data on such topics as monumental urban expression, restoration and colonial revival. In short, *Historic Philadelphia* is a *pot pourri* indispensable for the study of Philadelphia's early architectural heritage; but, unfortunately, just that—a *pot pourri*, with no attempt to relate the individual contributions and, to this reviewer, a disappointing failure, beyond brief mention in Mr. Riley's essay, to cap the volume with a critical account of the present scheme for replanning the Independence Hall area.

What *Historic Philadelphia* begins, *Philadelphia Architecture in the Nineteenth Century* continues, inevitably inviting comparison with its Baltimore equivalent. Both cities have utilized masonry construction more than most American cities, while both show significant episodes in the development of metal construction; both faced the problem of the row house. What is more, both exhibit the same curious tendency toward innovation leavened by conservatism. In Philadelphia there are the diverse engineering interests of the Greek revival architects, experiments with metal in the 'thirties and 'forties, and Frank Furness's bold quest for an original architectural style in the 'seventies and 'eighties. But engineering experiment moved elsewhere and Furness's creative phase terminated before 1900 leaving no issue in Philadelphia. So with Baltimore, which shared Latrobe and Mills with the larger city and (as was recently pointed out in the pages of this journal by Rich Bornemann) flirted briefly with the revolutionary ideas of Ledoux. Baltimore became the major American center for the production of architectural ironwork. But, the most creative architects of the Greek revival period left the city, and so ultimately did the iron works.

If the two cities have their similarities, they also reveal striking differences. Considering their proximity, they shared surprisingly few architects. During the early decades of the century, of course, Latrobe and Mills moved south from Philadelphia and built in Baltimore while working on commissions in the national capital. After these two, there is only the ubiquitous Olmsted and the firm of McKim, Mead and White (probably more McKim in the Philadelphia Cricket Club, more White in the Baltimore works). While Philadelphia had been a center for major architects during the nineteenth century, Baltimore had depended on designers from outside the city for her major structures—the four above mentioned plus Upjohn. There is the important exception of Godefroy, fourteen years of whose frustrated career were spent in Baltimore, and further exceptions in the vigor of certain anonymous works which may or may not have been designed by Baltimoreans. The Greek temple façade of the McKim Free School of 1822, the U.S. Appraisers Stores, completed in 1839, and certainly among the major American industrial monuments, the cast iron front for the building now occupied by the Robins Paper Company and so much finer than pompously bedecked Sun Iron Building, across the page, the polygonal passenger car shop for the Baltimore and Ohio Railroad of 1884—all are anonymous, utilitarian, powerful, and monumental expressions of the hard geometry of a masculine, materialistic, self-confident age. But despite this architectural glory in the nineteenth century, Baltimore's two Longs, the Dixon brothers, and the partners Niernsee and Nielson simply cannot match Philadelphia's Strickland, Haviland, Walter, Notman, Sloan, Furness and Eyre.

As a result of this disparity of talent the two volumes under consideration tend to take divergent views toward the treatment of local architectural history. The Philadelphia study explicitly concentrates on the "best examples"; the Baltimore volume less consciously emphasizes more representative structures. This suggests a

major problem in respect to such local histories: to what extent should quality be adulterated by the representative? But there are other problems germane to local architectural history which these works also suggest. To what audience is the history directed; what function will it serve? Finally, just what *is* the relation of the city or region to its architectural production?

In respect to the first of these problems, the author-editors of the Philadelphia volume have the preferable position, since quality should always be the preëminent consideration. Concern with quality in an area as limited as a locality, however, is likely to obscure development. In this respect, the more representative selection of Baltimore structures has the advantage. For example, it shows a remarkable sampling of the whole development of the picturesque aesthetic as applied to church construction, whereas the development is much less clear in the Philadelphia volume. More significant perhaps is the series of photographs illustrating the entire development of the row house in Baltimore: examples from the late eighteenth century, from around 1800, 1815, 1845, two from the 'fifties, the same for the 'seventies, and finally duplexes of the early twentieth century. Contrast this array with but four examples from Philadelphia: two from the first decade of the nineteenth century, two more from the 'fifties. Although these four may be the "best" of their kind, here is certainly one instance where many would wish that the standards had been lowered to include a sprinkling of more average structures. Here, then, is the first dilemma of the local architectural historian: quality and/or development.

As for the second problem, it is really a cluster of problems and among the most difficult faced by the local historian. Unless he is writing a specific work for a special audience, he should, like the authors of these volumes, address a composite audience—the tourist, the architect, the architectural historian, and the antiquarian. This is simply another way of saying that most local histories must appeal to more than the professional reader. As they discuss a community, so they should engage the interest and sympathy of the community; but never at the price of professional contempt, for without professional approval such histories might better go unwritten. Ideally, the tourist wants a succinct evaluation which is, nevertheless, not so opinionated that it speaks louder than the buildings. The architect agrees with the tourist (often he *is* the tourist), but needs more elaborate illustration than the casual sightseer—details and especially plans where these are significant. The architectural historian (or the architect with a sense of history) seconds these demands and, in addition, begs for data on stylistic development, building conditions, and on the architects themselves. Finally, the antiquarian seeks relationships between the architecture and the social context of its erection. Although such omnivorous demands preclude perfection, ideally the compromise should take cognizance of this quadripartite audience.

Surely all readers will applaud the generous, large-sized, well displayed plates in both nineteenth-century volumes, while most, considering the purpose will be happy that the authors have kept their introductions accessory to the plates. Thus far both ideally suit the tourist. But the traveler will surely want a map such as the end-paper map in the Baltimore volume which is a model of clarity. For some inexplicable reason the Philadelphia venture boasts no map; the listing of street addresses is no substitute. On the other hand, the Philadelphia volume contains an admirable list of the buildings, followed by a short commentary, the list indexed by both the name of the architect and that of the building. Why the editors could not have gone a step further and included architect and date under each of the plates instead of merely the name of the building, as did the Baltimore editors, is mysterious. But again, as though to balance the score, the Baltimore work contains no catalogue and no indexes. Finally, on this matter of convenience, the casual reader will certainly find the introductory essay by Howland and Spencer more clearly arranged than David M. Robb's briefer introduction to the architecture of Philadelphia. The Baltimore material appears in roughly chronological order, the text broken into a series of three essays on colonial, Greek revival and later nineteenth-century architecture, each essay followed by the sheaf of photographs illustrating it. The sense of development is somewhat obscured by a typological division, but this vice is exacerbated in Robb's similar arrangement by the fact that he covers the whole hundred years in a very brief compass. He is hampered in his introduction by a meaningless separation of the plates between monumental and domestic structures.

Excellent as are the plates in these volumes, both architects and architectural historians will be dismayed at the lack of interiors and plans. The Philadelphia volume shows only four plans, the Baltimore five with two cross-sections. Of course, plans and diagrams are impossible for all structures, but it would be valuable to have, for example, plans for the McKim, Mead and White houses in Baltimore and the Eyre houses in Philadelphia. Just so for the typical development of planning in the row houses; indeed the lack of such plans robs the extensive coverage of Baltimore row houses of much of its significance. Or again for the Pennsylvania and Johns Hopkins Hospitals, two instances where the authors assure us that the plans are the most significant aspects of the buildings! Considering how difficult it is to come by adequate photographs of interiors, the Philadelphia volume is rather generous in this respect, although it is difficult to see why Furness's magnificent banking room for the Provident Trust Company has gone unreproduced. (Both this interior—in a very inadequate photograph—and the plan for the Pennsylvania Hospital just happen to be included in Smith's essay in *Historic Philadelphia.*) The Baltimore volume discusses the problem of the materials characteristically used in the city with their sources of supply much more thoroughly than its Philadelphia equivalent, although both are wanting in this respect.

As for the discussions of stylistic development and the critical evaluation of particular structures, the commentary of Howland and Spencer is, if straightforward, almost too colorless, too tepid, even granting the desirability of leaving the spectator sufficiently unfettered from critical assertiveness so that he has "room" for his own reactions. Certainly, Robb goes much too far in cutting the spectator adrift from the anchor of specific criticism. He virtually limits his discussion of the Philadelphia development to a characterization of three general periods which he describes as the dominance of Greek revival forms during the first third of the century, "even greater variety" of forms in the succeeding period, with "increasingly greater accuracy to historical precedents, at least in ornament and detail" during the final quarter. The architectural historian will also regret the lack of information on architects in both volumes. And finally, he will take exception to the assertion in the Baltimore volume that Buffington conceived the skyscraper (p. 96) unless the phrase "and his contemporaries in Chicago" is a serious modification, and that Olmsted's 1891 scheme for Roland Park represented the "first planned suburb in America" (p. 146)—plans for Llewellyn Park, Orange, N.J., Short Hills, N.J., Riverside, Ill., and Tuxedo Park, N.Y., being at least four earlier important examples that immediately come to mind.

In respect to the antiquarian's interest in social history, both volumes are weak, although the Baltimore study takes some notice of this area. To ascertain the right amount of social history for such volumes as these is as subtle a decision as the right amount of critical analysis. Too much social history and the architecture becomes a mere stage drop; witness many of the essays published by the American Philosophical Society. But obviously certain aspects of social history are very essential to understand the architecture. The question of program, for example; the role of the client; or that of new technology, especially pertinent for the Baltimore where we are told of the importance of the iron industry at midcentury, but unfortunately learn nothing about it. Such areas of investigation are particularly worthy of attention by the local historian, since they are areas where he can make contributions impossible for the outsider.

But perhaps this failure to consider the social milieu in which the architecture was produced is part of a larger failure to conjure up a picture of the city itself. The Philadelphia study does contain an evocative essay on the quality of the city's past by William P. Harbeson, together with a couple of street scenes (one of them as full of winter cold and moisture as a Stieglitz). And, of course, there are the views of row houses in the Baltimore volume, together with the plans for two developments—a gridiron

scheme of 1876 as a foil for Olmsted's picturesque lay-out at Roland Park. On the whole, however, both books depict the buildings without their urban context. So much is this the case that the Philadelphia volume contains no plan of Olmsted's work for Fairmount Park, nor any general view of the planning for the Centennial. And how interesting it would have been to have had a series of photographs indicating the transformations which have occurred around Baltimore's Washington Monument. Finally, this conjuring of the urban context suggests the further problem as to just what characterizes the architectural heritage of a particular urban center. What contributions does it make to the national heritage? What elements does it borrow from outside itself? At what times was it especially creative, and why?

Such questions are worth pondering for subsequent local histories; but so are the accomplishments of the volumes under discussion, for it is their general excellence which invites this scrutiny as to the ideal standard for such local architectural histories addressed, as these two are, to an omnibus audience. Both serve as permanent commemorations of local exhibitions, and thus the exhibition extends beyond the limit of the locality, instead of vanishing into museum filing cabinets as happened, for example, to the excellent exhibition of Buffalo architecture held a few years ago at the Albright Gallery. Both signal the start of photographic depositories for local architecture. Both provide discoveries that will come as surprises to those outside, ranging from delightful architectural incidents like the little Gothic guardhouse in Fairmount Park to the monumentality of the anonymous United States Appraisers Stores in Baltimore. Both finally preserve a record much of which is bound to disappear.

What better resolve for members of the Society than that of duplicating such volumes as these until all sections of the country shall be covered?

WILLIAM H. JORDY
Yale University

Erwin R. Goodenough, *Jewish Symbols in the Greco-Roman Period* (3 vols.; New York: Pantheon Books, 1953), illus. $25.00.

The discovery that the Jews of the Greco-Roman period evidently used pagan as well as Jewish motifs in their art has aroused speculation as to the nature of the Jewish faith at this time. Erwin Goodenough, an historian of religion, has written the first three of seven volumes in which he will study these motifs as symbols.

Tombs and synagogues are the repositories of the symbols. Some are found painted or carved on tomb or synagogue walls. The most significant of these are probably the tombs at Sheikh Ibreiq and the synagogue at Dura. Mosaics have also been discovered on a few synagogue floors, as at Beth Alpha. Ossuaries, sarcophagi, lamps, coins, and amulets are the principal movable objects carrying symbols. Verbal charms are included for their parallel use of images.

Architectural historians will be particularly interested in the material on the synagogues, both the basilical and broadhouse types. Plans and orientation appear to be related to Hellenistic and Early Christian structures. One problem here suggested is part of a general historical question: did Christian art emerge from a Hellenized Jewish art or from a common Hellenistic tradition?

The method of analysis which can be seen this far is primarily iconographical. The reader will for the most part have to make his own analysis of forms. Placing the synagogues with mosaic floors in a separate category, for instance, appears artificial when structurally they belong to the basilical or broadhouse types.

Volumes One and Two describe the materials in Palestinè and the regions of the Diaspora which are illustrated in Volume Three. Extensive analyses of the symbols will be made in the volumes to come. Documentation, indexing, and cross-referencing are excellent. It is a privilege to have a frequently neglected field of art history so generously and carefully presented.

MARION CARD
Yale University

ADDITIONS TO

WILLIAM STRICKLAND

Architect and Engineer · 1788 - 1854

BY

AGNES ADDISON GILCHRIST

A Documentary Supplement of the

Journal of THE SOCIETY OF ARCHITECTURAL HISTORIANS

OCTOBER 1954

(PHILIP STRICKLAND HARPER *of Chicago, great-grandson of the architect, has generously contributed funds for the printing of this supplement to publish some of the Strickland material which has been collected since the publication in 1950 by the University of Pennsylvania Press, Philadelphia, of* William Strickland—Architect and Engineer—1788–1854 *by Agnes Addison Gilchrist, which was also made possible by a subsidy from Mr. Harper.*)

I. INTRODUCTION

WILLIAM STRICKLAND, the pupil of Benjamin Henry Latrobe, began his career as a landscape painter, engraver and scene painter. For forty-six years he was a practicing architect and engineer. As an architect, his greatest contribution was as a planner of institutional buildings and designer of outstanding monuments of the Greek Revival in this country. Among the latter are the Second Bank of the United States, 1818–1824, and the Philadelphia Exchange, 1832–1834, in Philadelphia, and the Tennessee State Capitol, 1845–1859, in Nashville which was completed by his son after his death in that place in 1854.

During the past four years a great number of people have sent in photostats or transcripts of Strickland documents or references to Strickland material. More than a hundred and fifty items have been collected, all of which would have enriched the former study. I wish to thank all those who have contributed and to mention especially Louise Hall, Duke University; Henry Howard Eddy, Pennsylvania State Records Officer, and Hubertis Cummings of the Pennsylvania Historical Commission; Robert Smith and George Tatum of the University of Pennsylvania; Edward Riley of Colonial Williamsburg; Charles E. Peterson of the National Park Service; Miss Jeannette Eckman and Leon P. de Valinger, Delaware State Archivist.

The new material does not alter the over all picture of Strickland's career, but does point up three aspects of it:

The new material dealing with insane asylums and prisons shows that he was a pioneer in the design of institutional buildings, but not so successful in solving their problems as his younger contemporary John Haviland.

The second field of endeavor upon which the new material has cast light is in the design of steeples. His first architectural work was the Masonic Hall in Philadelphia for which his plans were approved in November 1808, when he was twenty years old. It had a Gothic Revival design, the most spectacular feature of which was the wood steeple, 180 feet high, which during the ten years that it stood added to the skyline of Philadelphia and was highly admired. Twenty years later Strickland designed the present steeple on Independence Hall which has become a national landmark. The new material adds three other steeples designed by Strickland (Figs. 24, 26, 28).

The third aspect of Strickland's career which is emphasized by the additional material is the fact that he did more work in the adjacent states of New Jersey and Delaware than was recorded in 1950.

The most glaring omission of Strickland buildings still standing in Philadelphia in the previous volume is that of the Mechanics Bank (Fig. 20) on the west side of South Third Street near Market which has inscribed on the inner plinth of the architrave, "William Strickland Architect J. Struthers Mason 1837."

More material on the training and position of his father John Strickland (Fig. 1) has come to light and is to be found in the doctoral thesis of Louise Hall, "Artificer into Architect," Radcliffe College, March 1954.

In the National Archives in Washington, D.C., there is much unpublished material dealing with the federal buildings designed by Strickland and especially their subsequent history of repairs and alterations; for example, the Second Bank of the United States which became a Custom House in 1844 and on which Strickland was employed to make the alterations at that time. There are records of the later alterations under the supervision of Isaiah Rogers when he was Supervising Architect in 1864–65, and of later repairs and alterations in 1879–81 when John McArthur was the architect in charge and Thomas U. Walter was employed by him as Clerk of the Works at $92 a month.

Some of the most important documents dealing with Strickland's work both as architect and engineer have been found in the Pennsylvania State Records Office by Dr. Eddy and Dr. Cummings. The latter is making a full study of the Pennsylvania Canal of 1825–1836. Hundreds of volumes of ledgers and letters and contracts, as well as surveys and sketches which give the detailed history of this State Canal and Railroad are preserved in the Pennsylvania State Land Office. These are in the custody of Warren J. Daniel who generously permitted me to use the material and provided me with many photostats of the Strickland letters and sketches contained therein.

For the personal life of Strickland from 1820 to 1823 the most informative document is an account book now in the Pennsylvania State Records Office. There are a few sketches in this small volume. The most interesting is the sketch of Fort Hamilton, so named because this fort was erected on the banks of the Schuylkill on the property of William Hamilton, who is best known for his country house Woodlands, still standing in West Philadelphia. The fort (Fig. 3) was erected as part of the fortification of Philadelphia in 1814. After the war was over, the fort remained unused until the Hamilton family petitioned for its removal. (Cf. "Minutes of the Committee of Defence, 1814–1815," *Memoirs of the Historical Society of Pennsylvania*, Vol. 8, Philadelphia, 1867.)

There have been several drawings by Strickland which have come to light. The most interesting is the well-rendered façade of a country house which is in the Stauffer Collection in the Print Room of the New York Public

Library (Fig. 8). It has a dome and low central porch and is the most ambitious design for a residence which has been found. As was the current practice of the architects of the early nineteenth century, at each window curtains are shown half of magenta and half of yellow. No identification of this drawing has been made.

Five drawings by Strickland were found in the Meredith Papers in the Historical Society of Pennsylvania. They are signed but undated (Fig. 14). They appear to deal with the alterations of the Academy building on Fourth Street in Philadelphia.

Another drawing which is now in the Arthur Sussel collection in Philadelphia and formerly belonged to Carl Drepperd, is a meticulously executed watercolor of the façade of Dr. Rush's house in Philadelphia (Fig. 9).

Mr. de Valinger and Miss Eckman told me of the present location of the survey of New Castle, Delaware, which was executed by Strickland, Mills and Peter Lennox under the supervision of Benjamin H. Latrobe. In the Delaware Archives in the State Records Office in Dover Mr. de Valinger found a letter from Strickland giving the estimate for the proposed Sussex County Court House (Figs. 17, 18).

Undoubtedly more material will be noted continuously as more people study the first half of the nineteenth century. Some of the professional letters of Strickland which have been brought to my attention are printed herewith. Mrs. Nell Savage Mahoney, who has long been gathering material for a biography of Strickland, has many Strickland letters in her possession. Mrs. Joseph Carson of Philadelphia also has Strickland letters. Carl Williams of Philadelphia knows of many unpublished Strickland buildings in New Jersey.

II. Three Designs for Insane Asylums

The first insane asylum in this country was erected in Williamsburg, Virginia, in 1769–73. The first asylum to introduce the reforms of Pinel and Tuke which date from 1792, was the Friends Asylum outside Philadelphia, designed by Strickland in 1815 and completed the following year. The plan introduced all the most forward-looking devices for the care and healing of "Persons deprived of the use of their reason."

Some of those features were the separate rooms for the patients in the two wings of the building. Another was the use of iron sashes on the windows so that the patients did not have to be chained and neither did the windows have to have iron gratings which give a prison-like appearance to many insane asylums. The design also took into consideration the theory that the most demented were best cared for in darkness as being more soothing than the daily change from daylight to night and so some of the rooms were without windows. These were heated with hot air and ventilated through openings in the ceilings so that the fetid smell which was formerly associated with the insane would be obviated.

Another feature to assure the good care of the patients was the large, comfortably planned central building for the people in charge and the well-planned offices in the basement.

An insurance survey was made on January 3, 1817, when the building was first completed, for the Philadelphia Contributionship by John G. Evans. It is preserved in the files of the company and is here published for the first time. It adds to our knowledge of this pioneering building, which is still in use, but much altered, and contains many details of interest about the materials and construction of the asylum and also of the barn which was on the property. The barn had three walls of stone and the south side of wood, a disposition of building materials which might be considered by those who are interested in solar heating.

The importance of insurance surveys as a source of architectural history cannot be too much stressed. While little of superficial stylistic form is recorded, the basic factors of plan, construction and materials are. For instance, in this survey one learns that the roof was slate, the gutters of copper and the downspouts of tin. The walls were of stone 22 and 18 inches thick and battlemented. There were plain marble mantels on the first floor and mantels with pilasters on the second floor. The flooring was of yellow pine common boarding throughout save in the garret where the floor was of white pine.

I have surveyed a Building belonging to "The Contributors to the Asylum for Persons deprived of the use of their reason" situated on the South side of a road leading from Frankford to the old York road about five miles from the City & about 2 miles west from Frankford, viz A Centre building 60 feet square & three stories high, two wings each 100 feet by 24 feet—two stories high—the walls of stone 22 & 18 in thick The lower story of the Centre building —divided into 4 rooms & two passages through the middle, intersecting each other at right angles—divided by stone walls—The floor of yellow pine Com^{n} boards—base only round, single architraves to the doors and windows, marble mantels to the fire places, plain, & marble hearths—doors double framed,—the 2nd story divided in 5 [6 in margin] rooms com^{n} yellow pine floor, base round, single architraves & mantles with pilasters, & marble jambs—the 3rd story divided in seven rooms—floor of yellow pine, base round single architraves to the doors & moldings to the windows—plain wooden mantles—& plain inside shutters to the windows—the Glass in the lower & 2nd stories 9 by 12 in sash double hung—Glass in the 3rd story 6 by 8 in, sash of cast iron—& a single sash of wood outside & hung.—The garret divided in 8 rooms—floor of white pine, plain base round, all the rooms plaistered—4 dormer windows in roof —plain & ridged.—Open newel stairs leading from the passage below into the garret—with ramped rail of poplar —skirted up the wall—(large)—all the doors of plank & 5/4 in boards — —

The wings are divided into a long passage—& ten rooms on each floor—division walls of stone—the floor of yellow

pine com[a] boards—plain base round—the rooms & passage — — door frames of scantling & doors of plank—with a small wicket in neach—Iron sash in all the windows, with a single wooden one outside glass 6 by 8 in—the Iron sash below is glazed & the wooden one above—straight stairs at the extreme end of each wing leading into the 2d story,—kitchen, Ironing room, bake room, wash house & store room below-the two first with yellow pine floor, base round—single architraves, mantle shelf & dressers—with doors.—the other floor of mortar—& well secured from fire—all the joist—& the floor between the Joist are plaistered from the cellar to the garret—throughout—& the rafters of the wings—Brick eaves, Copper gutters on them—& slate roof on the whole building—& battlement walls—outside shutters to all the windows in the lower & second stories—the whole painted inside & out—newly built—two sash over each door of the Cells one of Iron the other wood—the latter glazed.—a door at the [second page of survey] the entrance from the centre building into the passage of the wings—with side lights & sash over.—panneled below the sash and the whole well built, & very secure from fire.—the pipes to convey the water from the roof are of tin.—

1 Mo. 3rd 1817

John G. Evans

$9000 at 4% $360

Also Surveyed their Barn.—38 feet by 45 feet stone walls on three sides & the south side of wood.—roof hipped & covered with Cedar—divided below into, passage & stalling & place for hay & grain above & a threshing floor of yellow pine—ledged door & shutters—those outside painted —a wooden gutter & trunk to the eve. ———

1 Mo. 3 1817

John G. Evans

$1000 at 5% cent $50———

Notations on survey

1) for Managers of Asylum

Edward Randolph

Rec[d] two Policies in lieu of those first issued & which have been lost or mislaid previous to 1818 our receiving them for Managers of Asylum Edward Randolph

9 Mo. 8th 1818

2) No. 3748, 3749—The Contributors to the Asylum—Survey

This survey is published through the courtesy of Charles E. Peterson who called my attention to its existence and of Jas. Somers Smith, Jr., Treasurer, The Philadelphia Contributionship for the Insurance of Houses from Loss by Fire, founded 1752, who furnished me with a photostat of the document.

In the New Almshouse in Blockley Township which was designed by Strickland for the City of Philadelphia in 1830 and completed by 1834, there was a ward for lunatics which was in use for over a hundred years.

In 1835, the Pennsylvania Hospital determined to build a Female Department for the Insane in West Philadelphia at Market and 49th Street. This was latterly known as Kirkbride's in honor of the great Philadelphia doctor who was connected with the institution and who did so much for the healing of the mentally deranged.

The plans of the Hospital were prepared by Isaac Holden, an architect who came from Manchester, England, in 1823, and practiced as an architect and builder in Philadelphia with his brother, from 1826 to 1828, when they returned to England.

The new building in West Philadelphia was so far completed as to be ready for occupation on the first day of the year, 1841. The period of construction had extended over four years and six months. The amount expended was $265,000 . . . .

For the purpose of obtaining some information of the history of the plan made by Isaac Holden, a letter of inquiry in relation to it was addressed to his son, John Holden, of Manchester, who stated in reply: "As to the hospital referred to I have always understood that the plan was obtained on a limited competition, one of the competitors being the late John Haviland and one other I believe named Strickland. I have a strong idea that the windows were made with iron sash bars instead of as was usual at that time—wood bars and iron outside bars in addition. I do not remember ever hearing what model or system he studied, but I should hardly think he had any information beyond what he could gather in America. I have compared the view of the old part of the Hospital with a drawing in my possession and they agree, and I assure you it is a great satisfaction to me to know that a building designed and (erected?) by my father so long since is in existence and still doing good work. I may say that after returning to England in 1838 the two brothers commenced practice in Manchester and one of their earliest works was the county lunatic asylum at Prestwick, near Manchester. I would have been much pleased could I have given you further information but unfortunately your request comes too late, as my father (Isaac) died in 1884, and my uncle in 1890.

This quotation is from Thomas G. Morton and Frank Woodbury, *The History of the Pennsylvania Hospital, 1751–1895*. Philadelphia, 1895, p. 165 & note; ill. opp. Courtesy of Louise Hall.

While Strickland was not successful with his plan for the Female Department of the Insane of the Pennsylvania Hospital, in 1835 he did design another insane asylum which was begun in 1842. This was for the Insane Asylum for the State of Pennsylvania the foundations for which were laid on the west bank of the Schuylkill between Gray's ferry and Carr's gardens and between the Philadelphia and Baltimore railroads and the Darby road, which site was south of the Hamilton estate of Woodland.

The report of the plan and the work completed which was made by Strickland on June 14, 1842 follows and gives a good idea of the general design and more particularly of the labor-saving devices such as the funnels for the used clothing so that it might be dropped directly to the cellar and the dumb waiters which would convey the food from the kitchens to the various floors. This asylum was designed to house 300 patients and so was on a much larger scale than Strickland's first design of an asylum, that of the Friends' asylum which had rooms for only 40 patients.

The heating and the plumbing both concerned Strick-

land greatly and for the latter he used a spring on the grounds to keep the conduits clean and so "prevent the escape of effluvium throughout the whole establishment." One of his first concerns were the culverts and diagrams of them and a plan of their location he added to his report.

Further research in the Pennsylvania State Records will explain why this first design for a State Insane Asylum was not carried out and the forthcoming study of John Haviland will doubtless tell why the state changed the site of its first asylum to Harrisburg and employed Haviland to make the design in 1848.

Dr. Henry Howard Eddy, Pennsylvania State Records Officer, found the following document among the papers of the Records office:

Auditor General's office Harrisburg May 26th 1845. This is to Certify that the foregoing are true copies from the Originals on file in this office— Witness my hand & seal of office the day and year aforesaid— John A. Purviance Auditor General

To The Commissioners for the building an Insane Asylum for the State of Pennsylvania—

Gentlemen

In obedience to the resolutions of the board passed on the 7th ultimo, directing the Architect to report as soon as practicable what amount of work has been done by each contractor under the contracts entered into by the board for the building the Asylum, and also requesting the Architect to report the details of the plan adopted by the Commissioners, so that the same may be incorporated in a report to be prepared for the Legislature of the State.

I have now the honor to submit for your consideration a precise and particular estimate of the cost of the workmanship and materials now forming a part of the foundations of the building, as well as a detailed description of the plan adopted by the Commissioners.—

These foundations are laid upon a beautiful site of elevated ground on the west side of the river Schuylkill between Grays' ferry and Carr's gardens and between the Philada and Baltimore railroads and the Darby road, and is elevated above the level of the river and of the City of Philadelphia and her most extensive and useful public works.—

In plan the building consists of a central projection and main wings, flanked by Verandahs upon each of the returning wings.—The principal front is toward the N.E. and is 467 ft. in length:—The returned wings are each 236 ft. these, as well as those of the front, are 3 stories in height; —The Centre building and verandahs are four stories, each with a quadrangular pitched, roof and the whole to be covered with Pennsylvania Slate over a bold projecting eve.—

The wings alone contain the dormitories, for each class of the Insane and they are calculated to accommodate 300 patients:—They are situated on each side of a Gallery or Corridor 10 ft in width; dimensions of the chambers 7 ft by 10 ft and from 11 to 12 ft in height and the ceilings of them all to be arched with brick; Each chamber is to be ventilated by a flue rising to the roof, and an open sash over each door way which is opposite to each of the windows on the front and rear.—

The warm air is to be introduced by flues from 8 furnaces to be constructed in the cellar story, and passed into the corridors of each separate story, these to be regulated by dampers placed 8 ft. above the floors.—

The Sash of all the windows are to be of cast Iron fixed upon central pivots in the sill and head and so arranged as to open 6 in on each side by the whole height of the window; the glass to be glazed in the cast iron frame, and a wooden frame surrounding the window sustains the whole. —In the arrangement of all the *Corridors* or *passages* they are made to have a free communication with the open air at each end; the one end entirely clear of the rear of the centre building; the other communicating with the verandahs, which are to be used as play rooms and for games and exercise either in fair or foul weather. These are each 50 ft. square and will be lighted and ventilated with moveable sash.—

In most of the Asylums for the insane there are defects in these particulars, especially in the direct connection of the corridors with the main or central building; In the plan which you have adopted this defect is entirely obviated and the introduction of the verandahs on each of the external angles of the building has been found highly useful in the management and economy of that excellent institution, the Asylum at Worcester in Connecticut.—

The Cellar Story is to be 5 ft above the surface of the ground and 6 feet below it. This story to be surrounded by an area 7 ft in width with sloping banks in every direction.—

The Kitchens and wash rooms are situated in each wing immediately under the dining and bath rooms of the upper stories:—

The water closets as well as the bath rooms have their drops into culverts of large dimensions which are to be arched over beneath the cellar floor and a fine spring of water will be introduced, under a rapid descent, to keep the conduits clean.—

The furnaces for the generation of hot air are to be placed in this story, two for each wing and the flue from each contains a cast iron smoke stack of 10 in. in diameter, they will be constructed for burning anthracite coal and supplied with air to be heated through openings leading from the outside of the building.—

The cellar story also contains all the necessary store rooms, drying rooms, laundry, bakery family dining rooms as well as rooms for domestics and upon the return wings a sufficient number of rooms, say 20 for the males and a similar number for the females, are to be constructed and set apart for the special accommodation of noisy and violent patients: In each of these wings three distinct classes of patients can be accommodated and from the position of the returned verandahs at the extreme ends of the building the most noisy will not interfere with the quiet of the inmates of the main building.—

The Basement Story on the first floor is divided into rooms ranged along the sides of the corridors and extending from a centre building through wings which terminate at verandahs.—

The Centre building is 95 ft by 52 and contains on the principal entry hall two rooms of 18 ft square each side of which is intended for the use of the superintendent as parlors, offices, Library and Apothecaries' shop:—In the second story the same arrangement of rooms is intended for the officers resident in the Asylum such as two parlors,

stewards' and attendents rooms:—a reception chamber for visitors and other rooms intended for the better class of convalescent patients:—all the other stories are similar in their arrangements and fixtures as those just described, and the right and left wings are completely seperated in the rear, by the projection of the centre building.—

A Supply of water may be derived from a beautiful *spring run* which flows through the whole extent of the premises which may be dam'd up at a small expense and the water power used to fill the tanks which are to be placed under the roofs of the verandahs and centre building, from which the water may be conveyed to every section of the building for bathing and other purposes.—

All the fixtures for washing and drying clothes are to be in the cellar story of the verandahs immediately under the tanks or reservoirs, and *funnels* will be made at every Stairway from the different stories and wards into which soiled articles are to be thrown down into receiving rooms and from thence into the wash rooms.—

Dumb waiters are to lead from the dining rooms of each story directly into the Kitchens below, in which fixtures of the most approved construction are to be placed for steaming, boiling, baking, etc.—

One of the chief merits of the plan, now entered upon, consists in the location of all the chambers and rooms, where *hot* or *cold* water is to be used over the *sewers or culverts* which are found beneath the cellar story along with the rear walls of the building, so that all the waste water from the interior, the yards, roof, and from the Indian spring flows through the culverts upon a rapid descent, which at once will cleanse and prevent the escape of effluvium throughout the whole establishment:—These conduits are sufficiently large to allow a man to pass through their whole extent, and from the situation of the building on the site, the ground falls off in every direction towards the spring run which empties itself into the river Schuylkill on the eastern boundary line of the farm.—

To the Northwards of the site of the building the grounds furnish many advantages afforded by dense woods and shrubbery bordering upon a rocky formation descending in various places precipitously towards the stream of water from whence the building is to be supplied, through which, at a small expense walks may be laid out by clearing away the underbrush without any expense in planting trees for the purpose of landscape gardening, and on the southern and Eastern portions of the ground, where the building is situated, I do not know a view, from any portion of the citys' limits, which can compare with the one now under consideration;—There is every object to gratify the minds as well as the eyes. The quiet as well as the bustling picture of natural and artificial life.—

The Architecture of the principal front is of the plainest possible character; without mouldings, columns pediments architraves or cornices,—It is simply *a plain rubble stone structure,* to be dashed up with gravel mortar in a strict rustic style, and with Tuscan proportions.—All the wood work of the exterior as well as that of the interior is to be varnished and not painted: The dormitories and passages are to be finished in rough sand plastering without cornices or mouldings or any decoration whatever, and the cost of the whole building, including the furniture and contingent expenses, with the purchase of the land, will not exceed the amount appropriated by the Legislature.

Respectfully submitted
by your obdt servt
William Strickland
Architect

Philadelphia June 14th/42.

H. R. Brodhead & Co.

Estimate of the Lumber furnished for wheeling plank, centering, Carpenter's shop, Blacksmith's shop, Lime house &c, for the use of the building of the Pennsylvania Asylum for the Insane, as per bill.— $1,095.52

Clyde & Kennedy

Estimate of the workmanship & materials furnished by Clyde & Kennedy 2054 perches @ $1.59.— $3,265.86
Excavations in foundations of Culverts and walls = 650 cubic yards @ 30 cts. $ 195.00

Saml. Copeland

Bill of the Lumber and Carpenters work done in assisting the Architect to lay out the plan of the building on the site of Pennsylvania Asylum for the Insane including Axes nails, measuring lines, rods &c—As per bill of workmanship $100.00

Benner & Cox

Excavation of Cellar & Culvert pits = 4069 Cubic yds @ 15 cts = $610.35

Thomas McCulley

Measurement bill of the Carpenters work done in the construction of a Carpenters shop, Blacksmith's shop and Lime house for the use of the building of the Pennsylvania Asylum for the Insane.— As per days work $325.00

Parker Keim & Sherrell

Bill of the Ironmongery; such as nails, hinges padlocks &c used in the building of the Carpenter's Shop, Blacksmith's shop and Lime house on the site of the Pennsylvania Asylum for the Insane As per bill $25.09

Benner & Cox

Estimate of the Workmanship performed in excavating the culverts and cellar of the building of the Pennsylvania Asylum for the Insane.—(plan showing position of culverts)

Excavation in the Culvert pits of the N.W. return wing and in the N. wing of the main building.— 2180 cubic yds
Excavation of the cellar of the return wing and centre building.— 1589 cubic yds.
Excavation of the Cellar of the S.E. wing.— 300 cubic yds.

4069 cubic yds @ 15 cts

William Strickland
Architect

N.B. The above amount of Cubic yds of Excavation is a full estimate.—The banks having caved and washed to a great extent from frost & rain.—

Clyde & Kennedy

Estimate of the Workmanship and materials furnished by Clyde and Kennedy in the building of the Pennsylvania Asylum for the Insane.—

Culvert under the N.W. wing..... 1028.
Culvert under the N. wing of the main building 404
Foundation walls of N.E. front and verandah ..... 500.
west wing wall and covering culvert..... 122.

2054 perches

Excavation in foundation of culverts & walls = 650 cubic yds done by Clyde and Kennedy @ 30 cts pr cubic yard.—

Quarried Stone perched up at the Quarries = Dimensions = 26 ft × 25 × 4 = 104 perches

William Strickland
Architect.

N.B. The above amount of perches is laid without mortar, and a large amount of rocks in the quarries is laid bare and cleared off and in reddiness for blasting—

III. Strickland Documents

1. Letter Oct. 1, 1816 to Nathaniel B. Boileau, Secretary of State of Pennsylvania, concerning Pennsylvania State Capitol, Harrisburg.

This letter was found by Henry Howard Eddy, State Records Officer in the Division of Public Records of the Pennsylvania Historical and Museum Commission, Harrisburg. It is interesting to compare with the letter of Feb. 24, 1817, *Strickland* p. 50, in which Strickland offers to erect the Capitol for $180,000 and to have it ready for the 1818–19 session and for a compensation of five dollars a day, a great reduction from the Oct. 1, 1816 letter in which he asks for 5% of 300,000 or $15,000. Stephen Hills won the competition and the corner stone was laid May 31, 1819. The building was opened on January 2, 1822.

Nathaniel B. Boileau Secretary of State

Sir,

The following is a description of the accompanying ground plan and Elevation for the State Capitol at Harrisburgh together with the terms for executing the centre building and connection thereof with the offices already erected.—

The Design of the centre building embraces 120ft. front by 135 feet in depth, including the Portico, which is a semi circle of 60 feet in Diameter composed of six Pillars 4 feet Diameter of the *Ionic Order* supported by a flight of steps 13 feet high—

The Ground plan exhibits the arrangment of the House of Representatives and its connection with the committee rooms, Library, Transcribing office, and the circular Hall or Vestibule, together with the interesting passages to the colonade connecting the wings to the centre.—

The Dimensions of the chamber of Representatives is 74 ft by 50 on a semicircular plan calculated to contain upwards of 100 members with all possible convenience.—

The committee Rooms 32 ft by 18 situated adjacent to the chamber of Representatives—

The Library and transcribing rooms of the same dimensions situated in front—

The Hall or Vestibule 45 feet in Diameter containing a flight of Stone steps leading to the Senate Chamber and rooms belonging thereto in the second Story being the same plan with the lower floor, this Hall or vestibule is surmounted by a Dome and sky light.—

The Senate Chamber is immediately above the Chamber of Representatives, and of the same plan 70 ft by 40 ft arched in the ceiling and lighted from the skylight and sides of the room.—

In the center of the colonade connecting this building with the wings, are appropriate Statues, emblematic of Liberty and Justice.

The centre building is composed of two Stories of 22 feet each, a dome and skylight rising 40 feet. The whole supported by a basement of 13 feet in height making the total elevation 75 feet, from the Terrace upon which it stands.—

In designing the State Capitol I have endeavoured as far as possible to preserve the character of the Offices already erected, by adopting the proportion of the *Ionic Order* in its leading features, at the same time keeping these Offices subordinated in the general arrangment of the front, in order to effect which the upper line of the Colonade is upon a level with second stories, presenting a grand avenue or covered way connecting the whole, by which means all business with the Capitol and Offices of State, may be transacted without being exposed to the weather.—

The nescessity of a strict compliance with the Architecture of the Wings is obvious, as any deviation in order or style would tend to injure the appearance of the whole structure, being beautifully situated, and calculated to produce grandeur of effect.

The capitol and buildings connecting the wings already erected, according to the accompanying ground Plan and Elevations, can be executed of such materials as are on the spot for 300,000 Dollars, and in consideration of the time necessary to finish this Edifice in a substantial and durable manner, requiring 4 or 5 years depending on the ease or difficulty of procuring materials or workmen, I will superintend the execution of the design now offered on the usual terms of 5 pr cent on the cost.—

I have the honor to be
most respectfully

Harrisburgh Octor 1. 1816—

Your Obdt servt
William Strickland
Archt
Philada

On the outside of this letter is the following notation: "1816, Oct. 1) Proposals for building the State Capitol at Harrisburg by William Strickland of Philadelphia —— 2 Copies sent to the Legislature Decr 1816———J. F."

2. Excerpt from Immanuel Church Record Book, Vol. I, 1822, telling of Strickland's contributions to the remodelling of the Church.

Photostatic copy of Immanuel Church Record Book, Vol. 1, pp. 103–104. Courtesy of Judge Richard S. Rodney.

To those, whose zeal and activity effected the rebuilding and enlarging of the Church, the present occasion was deeply interesting.—But two years ago, the Church was in almost ruinous condition;—now it was finished in a style of neatness and simplicity,—and even elegance,—that reflected the hightest credit on the Congregation;—the pulpit, reading-desk, chancel, pews and the whole interior of the Church, were arranged and furnished with much taste.—The exterior—with tower and spire rising to the height of One hundred and thirty feet,—the former furnished with a fine clock placed there by the Trustees of the New Castle Common, and showing a dial-plate on each side.—the latter surmounted with a beautifully gilt cross, ball and vane,—presented a strong contrast to the former appearance of

the Church and produced the most pleasing emotions.—

It is but an act of justice to notice in this place the important services rendered by Mr. William Strickland of the City of Philadelphia, Architect.—He furnished the plans for the improvement and enlargement of the Church; and when his professional avocations permitted; superintended the repairs at different times, and whenever consulted assisted with his advice and directions. All his services were gratuitously bestowed. He presented to the Church, a marble slab of the value of ten dollars,———which is placed in the West Side of the Tower, and records the date of the Church and the year of its enlargement.

3. Letter Sept. 15, 1828 to James A. Hillhouse of New Haven, Conn., giving Strickland's views on the design and heating of a residence. Sterling Library, Yale University, New Haven. Courtesy of Roger Hale Newton.

Philada. Septr. 15th 1828

Sir,

I have just finished a plan and South Elevation of your house—You will percieve I have made a few alterations in your ground plan which I hope will please you—The fire places will be best placed on the inner sides of the Drawing and Dining rooms being recessed and backed by heaters in the Hall—This arrangement will be advantageous on two accounts, first in getting rid of the projection of the Breast of the chimney stack in these rooms, which always produces a bad effect in breaking the cornice of the Ceilings besides taking up 2 feet of their breadth. Secondly the flues will be concentrated and brought out of the roof of the building in the best place for appearance.—The Stair Way is in a better position for privacy and convenience to the Dining room and Kitchen—I have never thought of beauty in a Stairway; indeed it is difficult to produce this effect in small buildings without too great a sacrifice of room and comf rt.—I think the closets are out of the way and yet conver ent—They may be well lighted from the passage leading into the small room on the North west angle of the buildir g.—I do not think you would like these articles placed in the main hall of the building.—In the South front elevation I have drawn a Pediment which is better in point of effect than the attic you speak of.—If an attic were made there would be a necessity for Parapet walls above the springing of the roof which would make your house look too much like a *cube*, besides exposing it to leaks in the gutter behind the wall—In this country we ought to guard against producing lodgements for the snow or rain on our roofs, for it is from these circumstances that our public and private buildings are brought to speedy dilapidation. A simple Pediment pitch on the South and North fronts will look best, containing two neat dormant windows on each flank for lighting the Garret story—The flues of the Library and small West room are to be carried out of the Roof as those of the Dining and Drawing rooms;—This will produce symmetry on both fronts.—The sills of the windows are to be level with the top of the washboard.

I have put down the dimensions of the several details on the plan and Elevation, and I believe the scale will point out those that are not marked.—Should you require any further information if you will drop me a line I will endeavor to furnish you with a speedy answer—

Yours very respectfully
William Strickland

James A. Hillhouse Esqr.

P. S. I have directed the parcel of Drawings as you directed to the care of Mr. Lawrence New York.

4. Letter Mar. 27, 1837 to Wm. D. Waples, Building Commissioner, Sussex County Court House, Georgetown, Delaware, giving description and estimate of Court House.

Delaware Archives, State Records Building, Dover, Del. Courtesy of Leon P. De Valinger, Archivist. Building completed in 1840. Altered in 1914 by Brinckloe and Canning with "Columns to be stock, taken from Hartman-Sanders Co., or equal . . ." Specifications, Office Board of Trustees. Courtesy of Mrs. Hess, Secretary of Board.

Philadelphia March 27, 1837

To

Wm. D. Waples Esqr

Dear Sir

Agreeable to the Request Contained in your Letter of the 16 Instant I have made all haste in designing & drawing the plans of a Court house and fire proof offices for the County of Sussex. I think I have made a *Convenient Plan* for the Hall Stairway and other interior arrangements for the Court Room and Jury rooms. If I have not been so happy in the front:—Your limits as to the funds are the basis of the Brick Appearance, and I could have wished to have introduced a few Columns and some other decorations, on the exterior but was afraid on account of the smallness of the sum to be appropriated.

I have drawn an Iron Gallery in front on the Court Room lobby floor for the use of the Cryer of the Court, Or for any purpose of disclaiming to a Multitude beneath, it is intended to project about 3 feet from the front of the long window and immediately over the door of entrance in the basement Story—I thought you might want a Clock and have therefore introduced one in the base of the Cupola which is very Conveniently placed in front over the Stairway which are double and Commodious

As you may at Some future day want a Gallery in the Court Room you can Continue the stairs to a level with the ceiling of the Jury rooms which will not be more than 12 feet in height and you will perceive that you can have a large Gallery over these Rooms, as the Court Room is 21 feet in height

My charge for these plans and estimate is $60.

With Great Respect Sir
I am yours very truly and Sincerely
William Strickland

Estimate of the Cost of Building a Court house and fire proof offices 60 feet Square According to the accompanying plans & Elevations, viz.

Digging and foundation 120 cubic yds..... $	24.00
Building Stone = 150 perches including freight—laying trim and Sand.....	450.00
Bricks—350,000 @ 10$ including laying lime and Sand.....	3500.00
Lumber for floors, Roof, framed Scaffolding &c.	1800.00
Carpenters Work	2300.00
Plastering Work and Materials.....	520.00
Painting and Glazing.....	450.00
Ironmongery, nails, Straps, Spikes &c.....	380.00

Zinc 3900 Sup^{r}. feet at 14 cts including Solder and putting on.....	546.00
Copper 750 feet of Copper for Cupola.....	275.00
Stone window sills 28.....	112.00
Stone steps front and Back doors.....	60.00
Total cost.....	10,417.00

Add 5 per cent for Contigencies
William Strickland
Architect
Philad^{a}, Nov^{r} 22^{d} 1842.—

5. Letter Nov. 22, 1842 to the Vestry of St. Peter's Church giving bill for designing and superintending the construction of the tower and steeple of St. Peter's.

Transcript of a letter in the Vestry minutes for Dec. 13, 1842 from the typed copy of the Vestry Minutes in the Rector's Office. Courtesy of the Rector, the Rev. Mr. Evans.

Dr the Vestry of St. Peter's Church
To Wm. Strickland, Architect

For professional services in constructing Tower and spire $250.

Gentlemen

I beg leave to present to you my bill for professional services in the construction of the St. Peter's Steeple. I have felt pleasure in reducing my charge against the Church to the one half of the accustomed Architect's fees and have only to regret that circumstances do not allow me the higher satisfaction of dispensing with the charge altogether——

I am very respectfully and truly yours
signed Wm. Strickland
Philad^{a}, Nov^{r} 22^{d} 1842.—

6. Letter Dec. 9, 1844 to Judge Blythe, Customs Collector for the District of Philadelphia, telling of repairs and alterations made in changing the Second Bank of the United States into a Custom House.

Washington, National Archives. General Records of the Department of the Treasury (MS). Strickland to Blythe, Philadelphia, Dec. 9, 1844. Courtesy of Charles E. Peterson.

This letter shows that Strickland was employed to adapt the Bank building which he had designed in 1818 to be used as a Customs House when it was bought by the Federal Government in 1844. This was the second time that Strickland had redone the building. The former time was in 1836–37 when the ownership of the bank passed from the Second Bank of the United States to the United States Bank of Pennsylvania. This and the other papers preserved in the National Archives show that this building received major repairs about every twenty years. We don't expect people to look as they did the day they were born when we meet them sixty years later. Houses also go through the natural processes of decay and repair, alteration and addition. The date of the original design of a building does not tell the whole story of what is presently visible. Therein lies the fascination of architectural history: to learn what we are looking at when we see a building.

To
Judge Blythe, Collector of the District of Philad^{a}

Sir

When it became necessary to put the former U. S. Bank building in order for the purposes of a Custom House I found that the whole of the interior as well as the exterior required a thorough cleansing and repair, particularly in the items of carpentry, masonry, painting & glazing.

It is now upwards of nine years since the building has had any repairs whatever, which neglect has rendered it imperative in you to incur a much heavier expense than otherwise could have been foreseen:—Upon the removal from the Old Custom House into the new one there was necessarily many new arrangements to be made in the Desks and Counters——The building had to be finished in almost every particular for the conveniences of the Officers, and you are well aware Sir, that the old building had no furniture at all, at least none fit for the proper uses of the new one.

There was an absolute necessity for additional carpenters work, making Desks, Counters, Shelving &c. all of which had to be done before & while the various officers were in the transaction of their ordinary business——The whole house had to be cleansed & white washed in the upper Story, and in the business rooms of the principal floor the walls and ceilings painted with two coats for the proper restoration of light and cleanliness——This item alone has cost upwards of $1300——at the fair rates per measurement and the City prices——

[In the Harrisburg Account book, there is figuring giving the total interior area of this building which may date from this period.]

Many of the grates and fire places had to be renewed——The marble columns and architraves of the principal business room required scrubbing with pummice Stone, to remove the dust of accumulated years, and for this purpose Scaffolds & ladders had to be used.

The Gas pipes were out of order as well as many of the locks and keys throughout the building.

The external portions of the premises, such as the coppering of the roof, Terraces, Steps and pavements required a thorough overhauling and amendment for the preservation of the building——no superfluous expenditure has been incurred in these items——the repairs have been but partially carried out, and as you have requested me to stop all further proceedings tending to increase the expenditure until the proper sanction from the Treasury and owing to the coming on of the winter season I have given orders to the workmen accordingly——

The whole amount of the jobbing above mentioned exclusive of furniture, has cost about $3500——and when the Carpenter & painters have finished the room now fitting up for the use of the Surveyor, all will be done that is immediately necessary.

In conclusion Sir permit me to draw your attention to the importance of making such alterations as will render the Cellar Story available for storage of Spirits and wines, which can be done at an expense of about $600——The Space in the Cellar is equal to 9000 superficial feet which would when filled bring in an income of at least $1000 per annum. This portion of the building cannot be made to serve the purposes of the Inspectors & appraisers, nor for the storage and safe keeping of sample goods; this can only be properly done by the purchase of a lot of ground in the

immediate neighbourhood, and by the construction of stores upon a fire proof plan suffciently capacious for the officers of this important branch of the Custom house——

Respectfully Submitted
by your Obd Servt
Signed William Strickland
Architect

Philadelphia Dec. 9, 1844

IV. Illustrations

Fig. 1. John Strickland, Sr., (1757–1820) by Thomas Sully, 1809. Courtesy of the owner, Lois Harper Wyman, Cincinnati.

Fig. 2. William Strickland, bronze bust by Gevelot. Library, Tennessee State Capitol, Nashville. This bust was exhibited in the Paris Salon of 1836. Photograph by Wiles. Courtesy of Fiske Kimball.

Fig. 3. Plan of the Parapet of Fort Hamilton, 1814. Drawing in the Strickland account book, State Records Office, Harrisburg, Pa. Courtesy of Henry Howard Eddy. This fort was erected above the Schuylkill near Woodlands, the country house of William Hamilton.

Fig. 4. Original Plan of the Western Penitentiary, Pittsburgh, Pa., as constructed by W. Strickland, 1820–27. It was remodelled by John Haviland in 1833. *Report on Penitentiaries* by William Crawford, London, 1835, Appendix, Pl. 3, opp. p. 14. Courtesy of Henry Howard Eddy.

Fig. 5. Elevation of the Western Penitentiary, Pittsburgh, Pa., as erected by Strickland. As above, Fig. 4, Pl. 4.

Fig. 6. Baltimore in 1752, aquatint by Strickland, 1817, from the drawing by John Moale, Maryland Historical Society. Courtesy New York Public Library.

Fig. 7. Prospective View of the City of Cairo, *c.* 1838. Lithograph by A. Hoffy after the drawing by William Strickland. Courtesy Knox College, Galesburg, Illinois, and the City Art Museum of St. Louis. Photograph by Piaget Studio, St. Louis.

Fig. 8. Elevation of a country house with dome, water color by Wm. Strickland. 7⅞ x 11 inches. Stauffer Collection. Courtesy New York Public Library.

Fig. 9. Dr. Rush's Mansion, Nineteenth and Chestnut Streets, Philadelphia. Water color drawing by Wm. Strickland. 11¾ x 15½ inches. Courtesy of the owner, Arthur J. Sussel, Philadelphia.

Fig. 10. Ceiling of Crosby Hall. Water color drawing signed: W. Strickland Archt., London, Feby 14th/38. "Shewing the timbers of the roof constructed of oak in a low pointed arch,—In plan it is formed into eight divisions in length and four in breadth, each of which principal compartments is again subdivided by moulded styles into four smaller divisions or pannels.—From the points of intersection hang pendants terminating in octagonal ornaments, each pendant forming the center of 4 arches.—The spandrils being pierced with trefoil headed niches.—The frieze consists of pierced quatrefoils in square pannels surmounted with an embattled cornice.—Length of Hall 55 ft. breadth 28 ft."

Fig. 11. Crosby Hall,—Bishopgate Street, London. Water color, London, Feby 10/38. "North doorway forming the entrance into the Council Chamber from great St. Helens court. This doorway has a low pointed arch inscribed in a square head and sheltered with a weather cornice; above it are three square windows separated by chamferred mullions of stone, the iron sash is walled in flush with the cross bars.

"The annexed sketch represents all the parts of the northern entrance in Crosby hall which is much dilapidated and weather worn, but, still the reeds and coved mouldings retain much of their original boldness and relief.

"This entrance to the council chamber projects from the oriel of the hall and is now used by a packing box maker.

"Glo. That it may please you to leave these sad designs
To him that hath more cause to be a mourner,
And presently repair to Crosby place;—
Richard III."

Fig. 12. Locomotive of "Great Western Railway from London to Bristol W. Strickland Archt & Engr. London, Feby. 6/38."

Figures 11, 12, and 13 are from the sketch book entitled "Sketches of Roman Architecture," Tennessee State Library, Nashville. Photographs by Steve Hood.

Fig. 13. Ground plan of a church at Gay and Fayette Streets as yet unidentified. Signed: William Strickland Archt & Engr. Portfolio of Strickland Drawings, Tennessee State Library, Nashville. Photograph by Steve Hood.

Fig. 14. Longitudinal section of a church. Signed: William Strickland Archt. One of five Strickland drawings recently found among the Meredith papers. Courtesy of the Historical Society of Pennsylvania.

Fig. 15. Ground plan of a project for an office building to be erected at Sixth and Walnut streets, Philadelphia, *c.* 1836. Courtesy Historical Society of Pennsylvania.

Fig. 16. Meriwether Lewis, Esq. Aquatint by Strickland after drawing by St. Menim, *Analectic Magazine*, Vol. 7, p. 328, April 1816. Sketch believed to be only extant likeness of Capt. Lewis in 1816. Courtesy New York Public Library.

Fig. 17. Sussex County Court House, Georgetown, Delaware. Designed by Strickland, 1837, completed 1840. Old photograph found by Leon de Valinger, State Archivist. Courtesy Delaware State Archives, photo No. PB #131.

Fig. 18. Sussex County Court House, Georgetown, Delaware. Present state after remodelling in 1914 by Brinck-

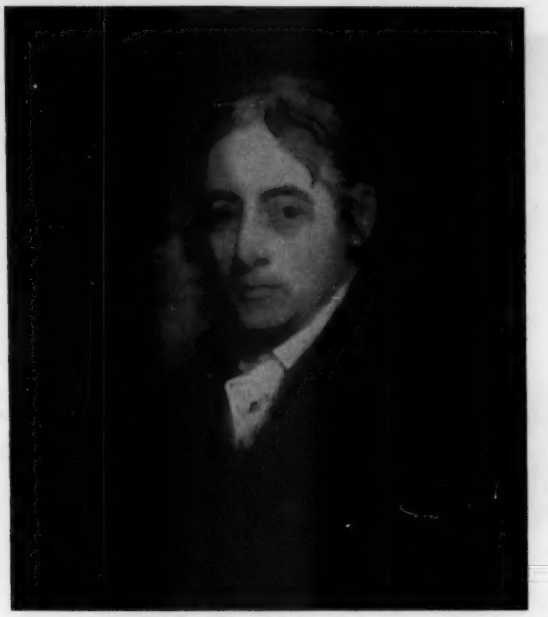


FIG. 1. John Strickland, Sr., (1757–1820) by Thomas Sully, 1809. (Courtesy of the owner, Louis Harper Wyman, Cincinnati)

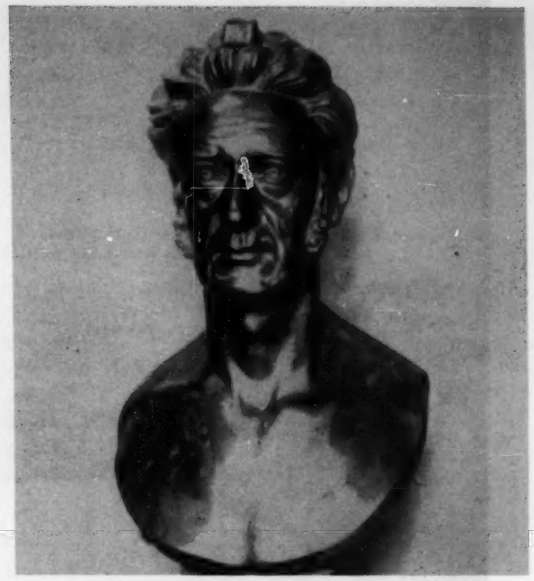


FIG. 2. William Strickland, bronze bust by Gevelot, 1836. Library, Tennessee State Capitol, Nashville.

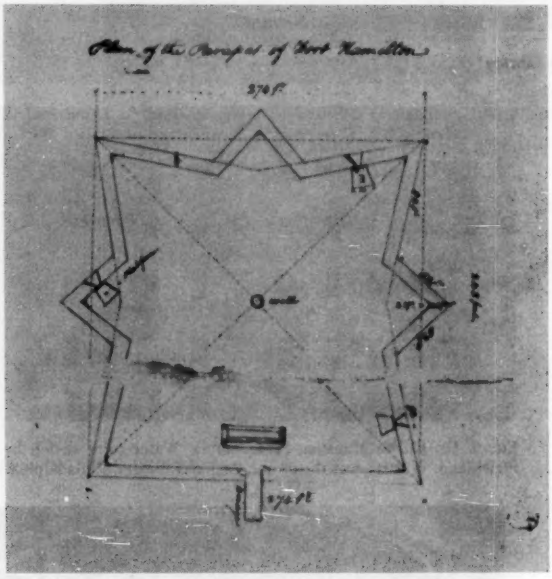


FIG. 3. Plan of the Parapet of Fort Hamilton, 1814. (Courtesy of Henry Howard Eddy, Pennsylvania State Records Officer)

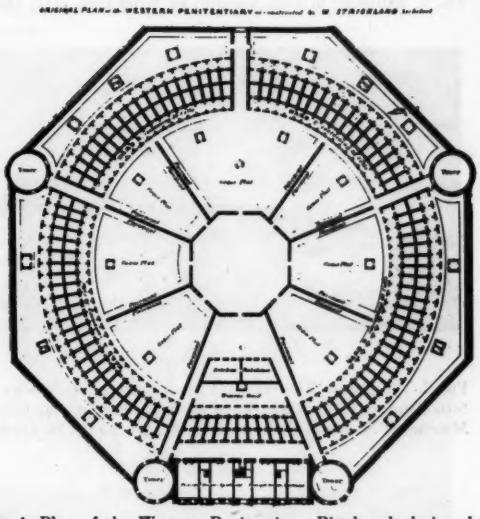


FIG. 4. Plan of the Western Penitentiary, Pittsburgh designed by Strickland, 1820. (Courtesy of Henry Howard Eddy, Pennsylvania State Records Officer)

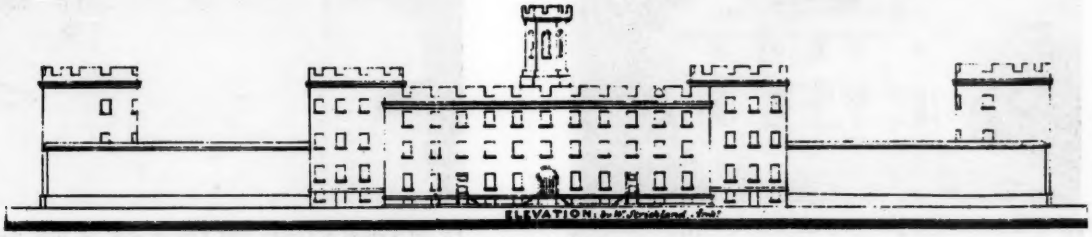


FIG. 5. Elevation of the Western Penitentiary, Pittsburgh completed 1827. (Courtesy of Henry Howard Eddy, Pennsylvania State Records Officer)

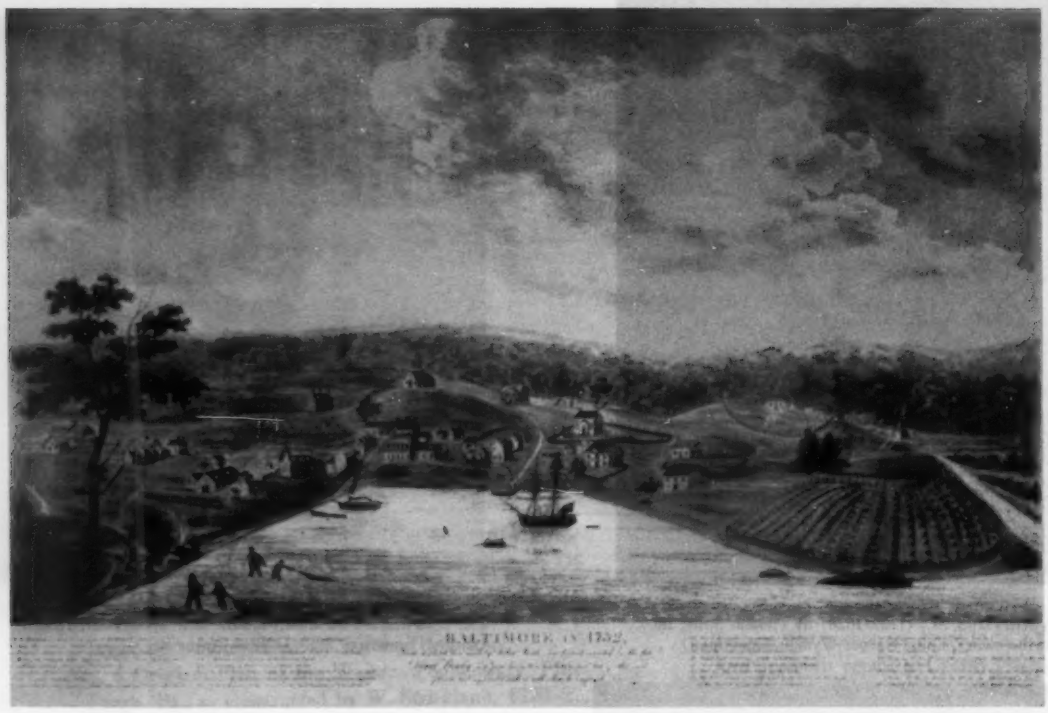


FIG. 6. Baltimore in 1752, aquatint by Strickland, 1817. (New York Public Library)

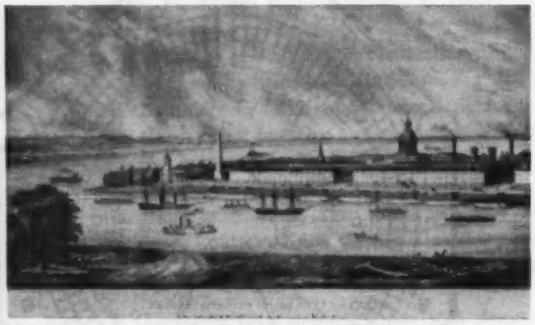


FIG. 7. Prospective View of the City of Cairo after drawing by Strickland, *c.* 1838. (Courtesy of Knox College and the City Art Museum of St. Louis. Photograph by Piaget Studio, St. Louis)

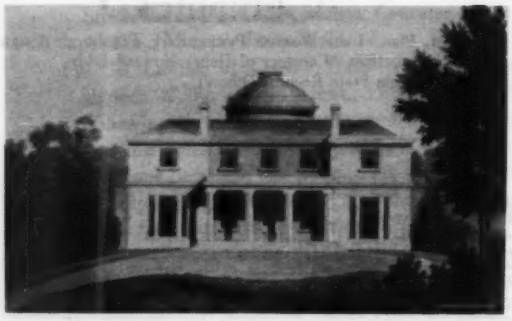


FIG. 8. Water color of a Country House by Strickland. (Stauffer Collection, New York Public Library)

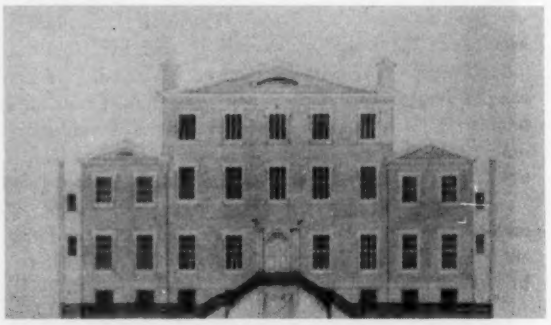


FIG. 9. Dr. Rush's Mansion, Philadelphia. Water color sketch by Strickland. (Courtesy of the owner, Arthur J. Sussel, Philadelphia.)

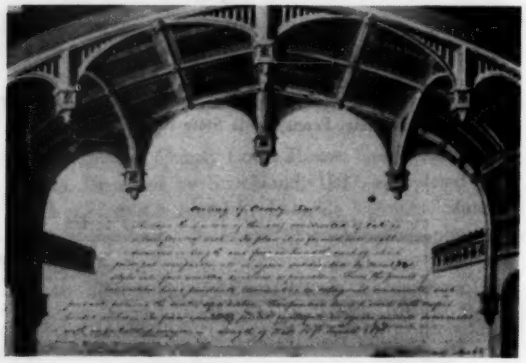


FIG. 10. Ceiling of Crosby Hall, London, Feb. 14, 1838. Strickland Sketchbook. (Tennessee State Library)

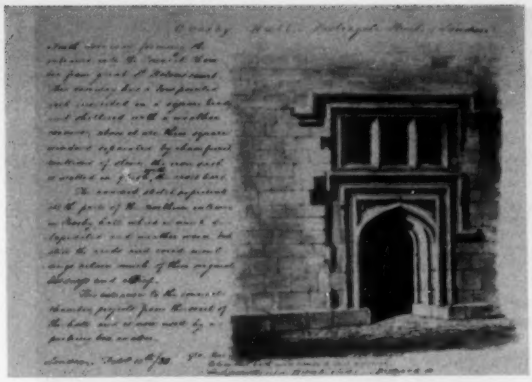


Fig. 11. North gateway of Crosby Hall, London, Feb. 10, 1838. Strickland Sketchbook. (Tennessee State Library)

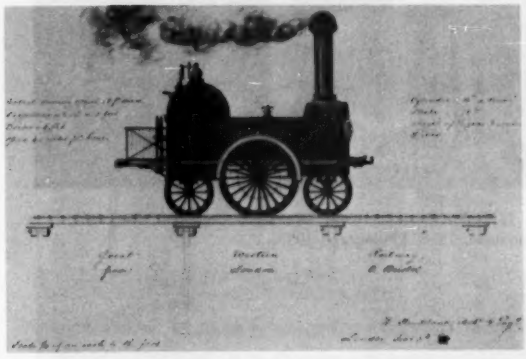


Fig. 12. Locomotive of the Great Western Railway, England, Feb. 6, 1838. Strickland Sketchbook.. (Tennessee State Library)

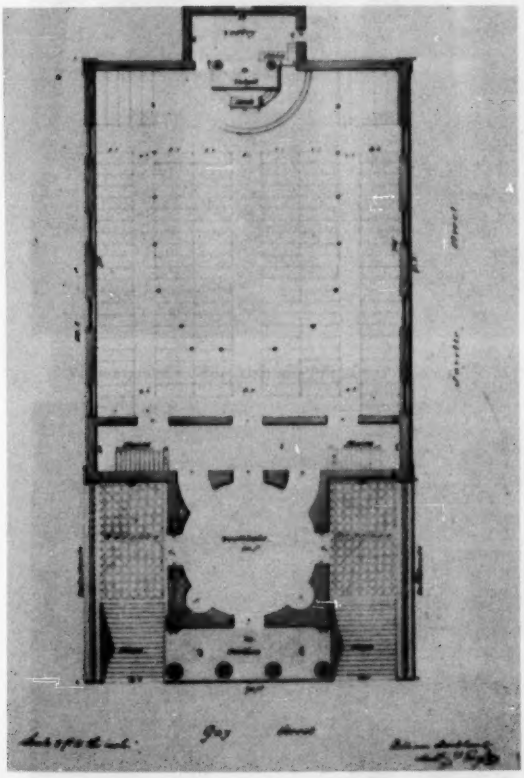


Fig. 13. Ground plan of a church. Strickland Portfolio. (Tennessee State Library)

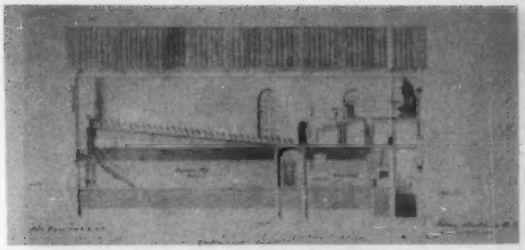


Fig. 14. Longitudinal section of a church. Meredith Papers. (The Historical Society of Pennsylvania)

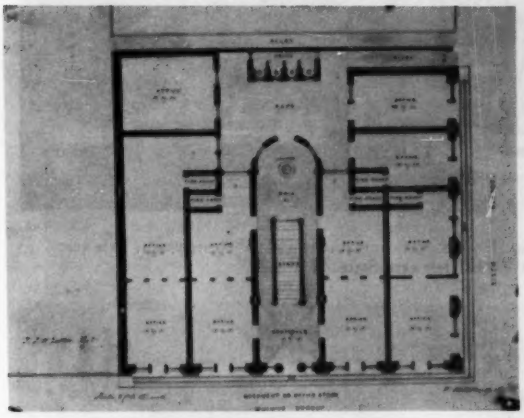


Fig. 15. Ground plan of a project for an office building at 6th and Walnut Streets, Philadelphia. (The Historical Society of Pennsylvania)

Fig. 16. Meriwether Lewis, Esq. Aquatint by Strickland after St. Menim, 1816. (New York Public Library)

FIG. 17. Sussex County Court House, Georgetown, Delaware, 1837–40. (Delaware State Archives)

FIG. 19. Philadephia Bank, 1836. Old photograph before 1863. (Seymour Adelman Collection)

FIG. 21. Sepulchral Monument of William Lehman, d. 1829. Harrisburg Cemetery, Harrisburg, Pa. (Courtesy of Hubertis Cummings)

FIG. 18. Sussex County Court House, Georgetown, Delaware. Remodelled 1914. Photograph 1953.

FIG. 20. Mechanics' Bank, Philadelphia, 1837. Photograph 1950.

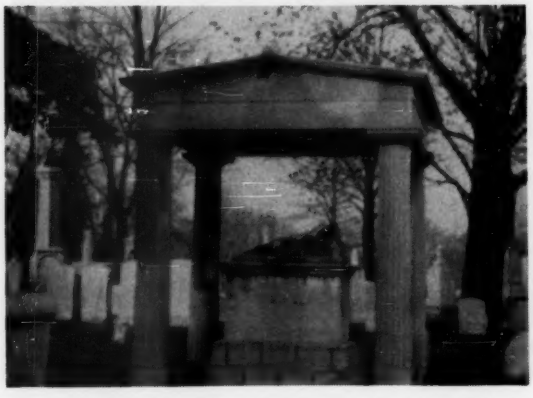


FIG. 22. Sepulchral monument in memory of Alfred Theodore Miller, 1840. Laurel Hill Cemetery, Philadelphia. Photograph 1953.

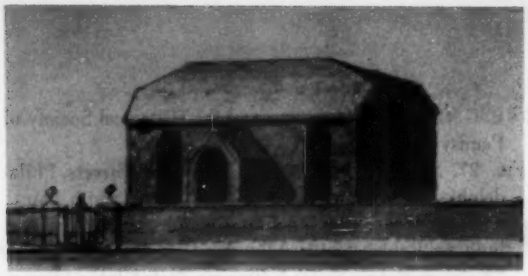


FIG. 23. Immanuel Church, New Castle, Delaware. Built 1703. Water color view of church in 1804 from Latrobe survey. Enlarged detail. (Delaware State Archives)

FIG. 25. Philadelphia Exchange, 1832–34. Codman photograph of the 1890's, showing Strickland Tower demolished 1900. (Metropolitan Museum of Art)

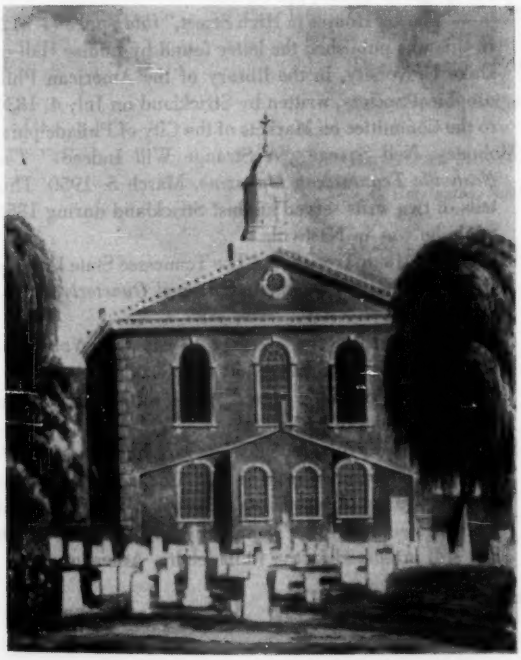


FIG. 27. St. Peter's P.E. Church, Philadelphia. Designed by Robert Smith, 1758–63. Lithograph after painting by R. S. Smith, April 1, 1842. (New York Public Library)

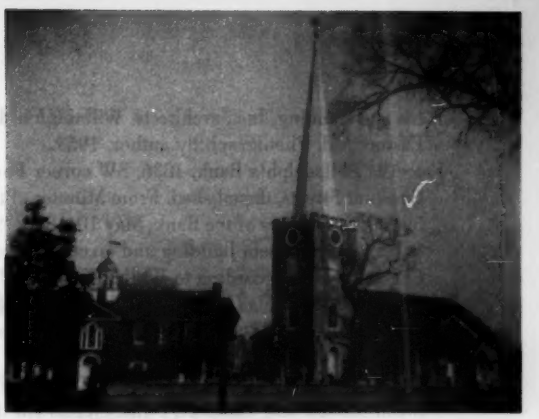


FIG. 24. Immanuel Church. New Castle, Delaware. Remodelled with tower and steeple by Strickland, 1820–22. Photograph 1953.

FIG. 26. St. Augustine's R.C. Church, Philadelphia. Cupola added by Strickland, 1829. (The Historical Society of Pennsylvania)

FIG. 28. St. Peter's P.E. Church, Philadelphia. Tower and Steeple added by Strickland in 1842. (The Historical Society of Pennsylvania)

loe and Canning, Inc., architects, Wilmington, Del., and Easton, Md. Photograph by author, 1953.

FIG. 19. Philadelphia Bank, 1836, SW corner Fourth and Chestnut Streets, demolished. From Minutes of the meeting of the Trustees of the Bank, May 10, 1836: "resolved to tear down present building and erect one fronting on Chestnut Street according to William Strickland's plan." Courtesy of Nicholas B. Wainwright. Old photograph of Bank before 1863, courtesy of Seymour Adelman Collection.

FIG. 20. Mechanics' Bank, south side of Third Street between Market and Chestnut, Philadelphia. On the inner plinth of the architrave is the inscription "William Strickland Architect J. Struthers Mason 1837." An early view of this bank is in Moses King, *Philadelphia and Notable Philadelphians*, New York, 1901, p. 80. Courtesy of Charles E. Peterson. Photograph by author 1950.

FIG. 21. Sepulchral monument of William Lehman, died 1829, Harrisburg Cemetery, Harrisburg, Pa. It was originally in the Zion Lutheran Burial Ground which was where the Pennsylvania Railroad station and tracks are now. Courtesy of Hubertis Cummings.

FIG. 22. Sepulchral Monument in memory of Alfred Theodore Miller, son of Matthew T. and Caroline Miller. Born Feb. 7, 1840. Died Sept. 8, 1840. Laurel Hill Cemetery, Philadelphia. Sculpture by Pettrick. Monument designed by Strickland and executed by Struthers. *Guide to Laurel Hill Cemetery*, John Notman, Arch. & del. Philadelphia, 1844. Courtesy of George B. Tatum. Photograph by author, 1953.

FIG. 23. Immanuel Church, New Castle, Delaware. Built 1703. Water color view of church in 1804 from the Latrobe survey of New Castle, Record Office, Wilmington, Del. Courtesy of Miss Jeannette Eckman, Leon de Valinger. Photograph courtesy of Delaware State Archives, No. C & T #81.

FIG. 24. Immanuel Church, New Castle, Delaware. Steeple and transepts (lengthened an additional 12 ft. in 1860) by Strickland, 1820–1822. Courtesy Albert Kruse, Charles E. Peterson, Judge Richard S. Rodney. Photograph by author, 1953.

FIG. 25. Philadelphia Exchange, 1832–34. Codman photograph of 1890's showing Strickland tower which was demolished in 1900; present tower by Louis Hickman. Courtesy of Charles E. Peterson and Clay Lancaster. Photograph courtesy of Abbott L. Cummings, American Wing, Metropolitan Museum of Art, New York.

FIG. 26. Cupola of St. Augustine's R. C. Church, Fourth near Vine, Philadelphia. Corner stone 1796. Built by Nicholas Fagan, 1799–1801. Front added 1826 and cupola designed by Strickland in 1829. Burned in anti-Catholic riot of 1844. *Memoirs* of the Catholic History Society of Phila., I (1887), 169. Courtesy of Charles E. Peterson. Lithograph by Geo. Lehman, published by C. G. Childs, 1830. Courtesy of the Historical Society of Pennsylvania.

FIG. 27. St. Peter's Church, Third and Pine Streets, Philadelphia. West view, April 1, 1842, R. S. Smith paint., J. H. Richards, lithotinted. St. Peter's was designed and built by Robert Smith, 1758–63. Cf. Charles Peterson, "Notes on Robert Smith," *Historic Philadelphia* (*Transactions of the American Philosophical Society*, New Series, Vol. 43, Pt. 1), p. 120. Print in Stauffer collection. Courtesy of the New York Public Library.

FIG. 28. St. Peter's Church, Philadelphia with tower and steeple designed by Strickland in 1842. Vestry minutes courtesy of the Rector, Mr. Evans. Photograph by Ph. B. Wallace. Courtesy of the Historical Society of Pennsylvania.

V. STRICKLAND BIBLIOGRAPHY SINCE 1950

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